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ANNUAL PLANNING REPORT
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JOB SERVICE NORTH DAKOTA
1000 EAST DIVIDE
BISMARCK, NORTH DAKOTA 58501

SHIRLEY V. PETERSON
EXECUTIVE DIRECTOR

PREPARED BY

RESEARCH AND STATISTICS
TOM PEDERSON, CHIEF

TOM GALLAGHER, LMI UNIT
PRIMARY RESEARCHER

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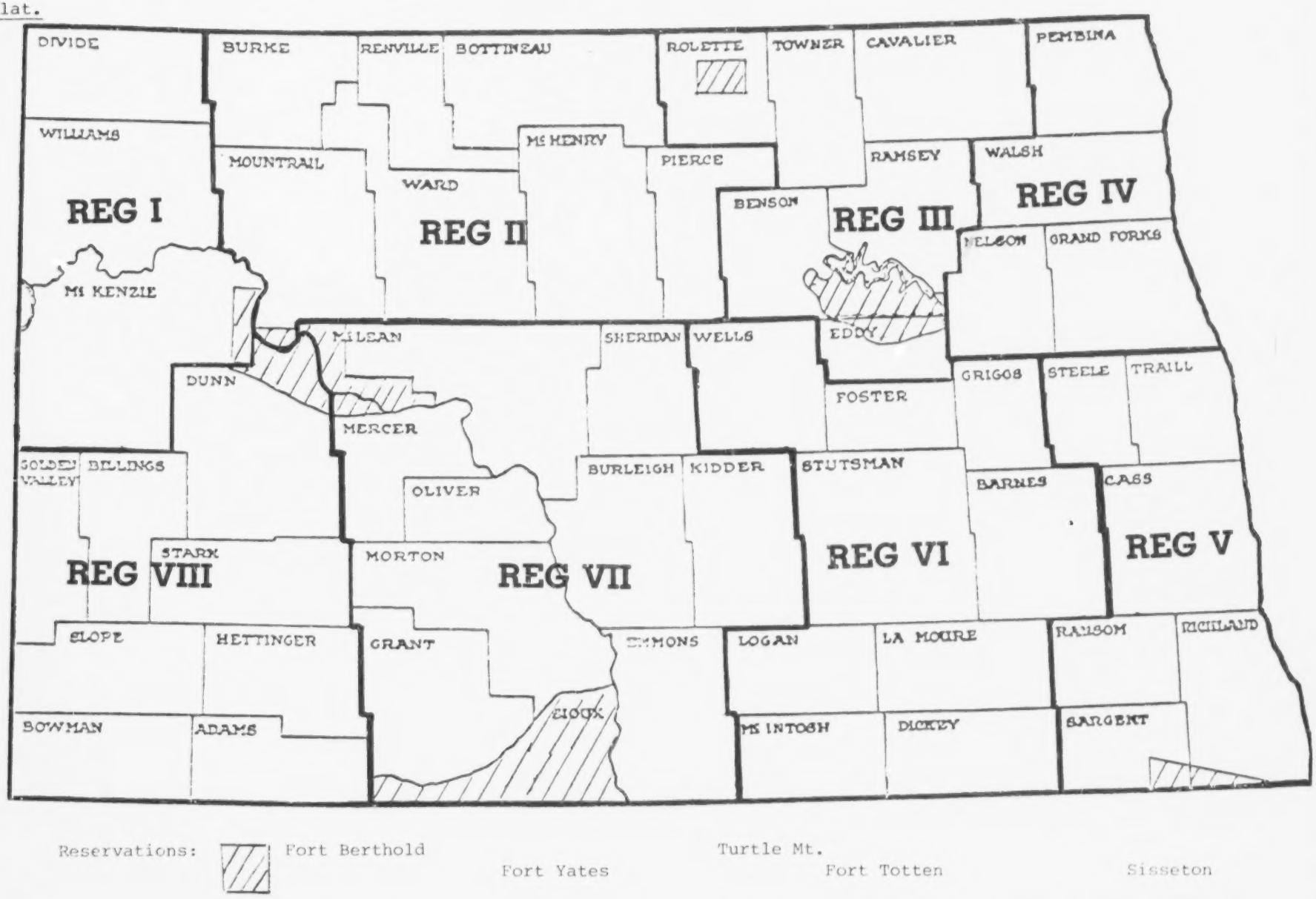

Reservations: Fort Berthold Fort Yates Turtle Mt. Fort Totten Sisseton

I. INTRODUCTION AND OVERVIEW

During the second half of 1983 and the first quarter of 1984, people across the nation began borrowing and spending money on consumer goods in a fashion rarely seen since the recessions of 1980 and 1982. Many suggested that the rapid expansion of consumer spending was the response of "pent-up demand" to declining interest rates. But most popular "current events" periodicals were asking at that time how much longer interest rates could remain as low as they were and when they would rise again. Acting on this information, it is certain that many people borrowed money to make purchases, then, because they anticipated higher interest rates late in 1984 and 1985. Anticipating and planning for higher interest rates is as much a reason for making current consumer purchases as is the notion that lower interest rates release pent-up demand. This illustrates two things: First, that people continually make plan for the future and those plans affect their current economic behavior, and second, planning for the future affects current behavior and thereby the future itself.

People continually plan, act, and affect their own futures. The overall purpose of this publication is to influence the quality of the decisions and plans people make about North Dakota's labor market.

One of the primary methods people use in planning is to plot a trend line between some significant past point in time to some foreseeable future. The significant past point in time for North Dakota is represented by a burst of economic growth during the late 1970s that ended with the drought of 1980. Since 1980, agricultural markets have been plagued by an oversupply of grain and have had to face customer countries who can afford neither the high world interest rates nor the expensive American dollars needed to purchase North Dakota grain. It is not clear at what point in time the problems of high interest rates, an expensive American dollar, and commodity oversupply will cease to be barriers to agriculture--North Dakota's major goods-producing industry.

The trend line used in this Annual Planning Report extends from 1979/80 to 1985. This period, by historical standards, is marked by comparatively slow growth in employment. But focusing on slow growth in

employment can divert our attention from the dynamics of the labor market, and North Dakota's labor market has seen a degree of turbulence not experienced by other plains states.

Like other plains states, North Dakota's economy has been strongly affected by weakness in agricultural markets and subsequent accelerated declines in farm numbers. But, unlike other states, North Dakota's economy has been strongly affected by a boom and bust cycle in oil and gas exploration and, on a slightly different time schedule, a boom and bust in power plant construction employment. These major currents in the labor market are associated with continued rural to urban migration within North Dakota, the growth and decline of population in western North Dakota, the distribution of wage rates, and steady growth in the services industry.

It is clear that North Dakota's labor market is being shaped by a number of forces. What the precise nature of these forces are and how they interact is not always a matter of consensus. In the following chapters, we have attempted to identify those forces and describe their role in North Dakota's economy.

Chapter II presents a discussion of some of the major processes shaping our national economy and offers interpretations of those processes from several forecasting services. Certainly, the national economy affects North Dakota. But how? The answer to that question is locked in our ability to disentangle two simultaneous processes. On the one hand, North Dakota, like every other state, is on a long-term historic course with some industries being affected by long-term national trends. On the other hand, certain segments of North Dakota's economy appear to respond quite readily to the upturn or cyclic increase in aggregate national business activity.

Identifying which industries are responding to the recovery and which are responding more to long-term trends is one helpful way of understanding the influence of the national (and because the U.S. plays such a dominant role in the world economy, international as well) economy on North Dakota. A second useful approach is found in Chapter III. Chapter III examines the regional context within which North Dakota's economy functions. North Dakota's economic future is tied to the future of the Northern Great Plains states and many useful discussions are

directed to regional analysis. The reader will also see that as analysis moves from the national to the regional, and then to state and local levels, that the quantity and, in some cases, the quality of data diminishes substantially.

Much of the analysis of the economy of the region is focused on agriculture. Most of the plains states depend on agriculture more than any other industrial sector for their economic well-being. And nowhere is that more true than in North Dakota. Agriculture is the topic of analysis in Chapter IV. Net farm income is expected to rise slightly during 1984 and 1985 according to one forecast for North Dakota. A review of specific commodity forecasts, however, suggests that net farm income will have difficulty rising faster than the rate of inflation. Even so, the reduced size of the Payment-in-Kind Program in 1984 (i.e., more acres put into production) means that farmers will spend money on farm inputs in a more normal amount and pattern than they did in 1983.

To capture the importance of the farm sector in one comparison means pointing out that what farmers spend on inputs to run their farm/ranch operations is often almost as much as the gross wages of the state's nonfarm labor force. The task of Chapter V is to trace recent events in the nonfarm wage and salary labor market that have led to a decreasing rate of growth in wages, and a labor force that is becoming more urban and oriented towards service employment. This chapter differentiates between the methods used to generate establishment survey-based estimates of the number of jobs and household survey-based estimates of the number of persons employed. The chapter explores the issues of trends and change in North Dakota's labor market and discusses in broader detail the relationship of North Dakota to the national economy.

Chapters VI and VII discuss the recent past and near-term future of the various nonfarm goods- and services-producing industries in the state. Linking measures of the labor market to economic and social issues such as worker income, consumer buying patterns, and family well-being are some of the most needed and yet technically difficult connections to make with the available data. And yet, these are the kinds of questions that determine whether or not North Dakota retains its population, its labor force, and its quality of life. For these reasons, parts of the analysis of goods- and services-producing industries focus

on some of the ways in which trends in the labor market influence who gets a job, how much they are likely to be paid, and what some of the consequences, especially demographic, of these trends appear to be.

The final chapter, on the labor force, focuses on the interaction between jobs and people. What is suggested in the analysis is that the study of aggregate numbers (e.g., job growth or the unemployment rate by themselves) is inadequate and insensitive to the economic and social meaning of job holding. The long-term trend in the nation is one in which jobs in goods-producing industries are much more difficult to come by than are comparatively low-paying jobs in service industries. Job growth in the present era of "high technology" has neither the economic nor social meaning that job growth had just a few years ago. And North Dakota, although it may not be affected as greatly as other states by the short-term cyclic swings of the national economy, is certainly subject to the long-term trend towards a services economy. Some of the consequences of these processes in the local labor market, discussed in the final chapter, are that the state's population is coming to be increasingly urbanized and is under continued pressure to emigrate from the state.

II. THE NATIONAL ECONOMY

One of the primary purposes of this report is to outline and trace some of the main paths along which national economic conditions and trends affect the economy of the region and North Dakota in particular. Clearly, movements in North Dakota's labor market do not mirror the national business cycle, but national policy and economic events increasingly influence the demand for North Dakota goods, the cost of producing those goods, and, thereby, the demand for labor in North Dakota.

During the last seven months of 1983, interest rates declined to about four-fifths of what they had been during the same period the year before. During each of those seven months in 1983, consumer installment credit grew twice as fast, and in some months much more than twice as fast, as it had the preceding year. This burst in consumer credit demand helped increase personal consumption expenditures as they rose to an annual rate of $2,231 billion during the fourth quarter. The fourth quarter rate of expenditure showed a 2.3 percent increase over the third quarter, rising at a substantially faster pace than the 1.9 percent increase shown from the third to the fourth quarter of 1982. As consumer demand grew, people got jobs, and as more demand was anticipated, people were hired to begin producing what would be sold in 1984 and 1985. 1/

As a consequence of a renewed demand for housing, automobiles, and other consumer items, total civilian employment averaged 103.7 million during the first quarter of 1984 (seasonally adjusted) compared to 99 million during the same quarter the year before. Although the number of jobs grew by 4.7 million, the number of unemployed only dropped by 2.6 million as more young people came into the labor force, and as some discouraged individuals who had been outside the labor force for some time claimed jobs. By April of 1984, the national unemployment rate had dropped to 7.7 percent (as compared to 10.1 percent a year earlier), and

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1/ Basic data, various issues of: Survey of Current Business, United States Department of Commerce/Bureau of Economic Analysis; Economic Indicators, Council of Economic Advisors; and Monthly Labor Review, U.S. Department of Labor.

forecasters were trying to decide how long and how strongly the national upswing in employment would last.

The chief factor precipitating employment growth has been the decline in interest rates. Beginning in October 1983, conventional mortgage interest rates (first mortgage new home purchases--U.S. average) fell below 12 percent and stayed there for five consecutive months. The last continuous stretch of mortgage money available at less than 12 percent occurred prior to March of 1980.

But this spring (March) the prime rate rose to 11.5 percent, the first upward movement since September 1983 when the rate stood at 11 percent. The upturn in the prime rate helped to push up local mortgage interest rates. By the end of March, for example, the Veterans Administration announced that it was increasing its home loan interest rates from 12.5 to 13 percent. And in April, the prime rate moved up to 12 percent. This upturn in the prime interest rate, in turn, forced local conventional mortgages to the 14 percent level.

Although variable rate mortgages have allowed more and more families into the home buying market, the analogy between interest rates and housing can quite adequately be extended to economic activity in other sectors of the economy. If interest rates continue to rise, demand dwindles, proprietors' income fades, and employment declines.

Nationally, the outlook is one of concern with consumers well aware of the consequences of rising interest rates. Thus, although the Index of Consumer Sentiment in the fourth quarter was at its highest point since 1972, " . . . unfavorable interest rate expectations represent the primary factor associated with diminished prospects for a long lasting recovery." (Curtin 1984:15)

In general, the current national economic expansion is expected to persist during the remainder of 1984 and all of 1985. But the rate of growth is expected to slow substantially as the recovery matures. (See, for example, Zarnowitz 1984b:30) Personal consumption expenditures, for example, are expected to rise by 2.1 percent from the third to the fourth quarter of each forecast year. But inflation is expected to rise from the 3.2 percent rate of increase during 1983 to the 5.5 to 6 percent rate

by the end of 1985, devaluing each year's nominal gain in consumption. (Data--Hymans, Crary, and Howrey, 1984:9) 2/

In part, personal consumption expenditures will be spurred by the desire of consumers to furnish new homes. Housing starts are expected to fall in the 1.7 million to 1.8 million unit range for 1984 and 1.5 million units during 1985. This rate of home building represents approximately the rate of growth established during the fourth quarter of 1983, and is 38.5 percent greater than the rate of home building established during the fourth quarter of 1982. (Data--McCracken, 1984:13 and Chase, 1984b:11) The higher plateau of consumption that marks this recovery has helped push this spring's interest rates up to the point where an increasing rate of consumption is beyond the scope of most consumers. At the same time, the sustained higher level of consumption has forced industry to begin its own expansion.

As we indicated last year, past recoveries have been characterized by rapid increases in housing starts with other types of construction becoming more prevalent later in the growth period. In response to rising consumer demand, the dollar value of manufacturers' unfilled orders at the end of January 1984 were 11.1 percent above where they were a year earlier. By March, manufacturing plant capacity utilization had risen to 81.1 percent compared to 71.6 percent a year ago. These demonstrations of the need for greater production capability were to some extent foreseen in 1983 as industrial planners outlined their intentions to construct new plants and purchase new equipment. During 1981-1983, real dollar capital spending for new nonfarm plants and equipment declined. The anticipated $343.6 billion in planned expenditures in 1984 represents ". . . a spending increase of 12.0 percent . . . the largest increase since 1966 . . . " (Landefeld and Seskin, 1984:27) In summary, commercial and industrial expansion should help sustain construction employment, at least nationally, as housing construction either holds constant or declines slightly.

2/ Other publications forecast slightly higher rates of increasing inflation.

Consumer demand for finished goods, then, is allowing the recovery to penetrate beyond the trade, services, and housing construction sectors to the heavy construction, durable goods manufacturing, transportation, and raw materials extractive sectors of the economy. However, the character of demand has changed. And secondly, the technology for producing intermediate goods in these industrial sectors has changed in substantial ways since the last recovery. Shifts in demand and the application of new technology in production change the demand for labor.

> "The energy crisis of the 1970's has led to some of these changes (in demand). As gasoline became more expensive . . . (intermediate goods) the inputs to the production of autos changed. Cars became smaller, taking less steel . . . and 'computers' were added to make cars more fuel efficient. Also, businesses were forced to be more energy efficient. Over time, they reduced their demand for electricity, gas, and oil by replacing older machines with more efficient models, renovating heating systems, and increasing building insulation." (Personick, 1983:27)

The processes of shifting demand and changing technology described above are taking shape to some extent in each industrial sector. As these processes take hold, their influence is apparent in both national and local employment statistics and forecasts.

Some have noted that technological change will help sustain the recovery, pointing out that ". . . with strong gains in productivity, the increase in labor costs per unit of output last year was about 1 percent." (McCracken, 1984:12) But there is a paradox here since one of the primary results of capital investment in new technology, which helps produce the shift in demand for labor, is to lower the average earnings of jobs. The reduced rate of growth in job-related income, in turn, impedes the ability of consumers to generate further demand for goods and services.

Some of the most rapid employment growth since the recession has been in the interest rate sensitive and high average earnings industries of construction and manufacturing. But it is important to make a distinction between a short-term business cycle and long-term employment growth trends. Such industries as services and finance remained stable or grew during the recession, undergoing little of the dramatic downturn and rebound of the construction industry and certain segments of manufacturing.

Construction and manufacturing have already undergone a period of rapid rebound in employment. This is one reason the forecast for employment growth during the remainder of the expansion is one of diminishing rates of increase. During the first quarter of 1984, employment stood at nearly 104 million--a 4.7 percent increase in employment over 1983-I (Roman numerals refer to the four quarters of the year). However, employment is expected to grow by 2.6 percent from 1984-I to 1985-I and by only 1.5 percent from 1985-I to 1986-I as employment moves towards its expected decade-long growth rate of 1.8 percent per annum. (Data--Chase, 1984a:C.64 and Personick, 1983:26)

The rapid rebound in employment growth in industries with above-average earnings tends to divert our attention from long-term trends in the labor market. A recent chronicle of the recovery noted that "(w)ith employment at a level of about 340,000 in January 1984, the blast furnace and the basic steel industry had recovered virtually none of its recession job loss . . .", implying that the industry will never return to the prerecession employment level of 571,000 that it saw in 1979. (Norwood, 1984:2) Partly in response to the types and amounts of steel being used in the manufacture of fuel-efficient cars, and for other reasons too, the current situation and expected outlook for the blast furnace and the basic steel industry only places it among a class of industries in which employment is expected to grow only slowly over the decade. Industries expected to decline or grow at only modest rates over the decade also tend to be industries with higher than average earnings per worker.

Industries with above-average earnings per job (based on the data in Appendix V and especially Table 16) are mining, construction, manufacturing, wholesale trade, and transportation, communications, and public utilities. Employment in government and finance, insurance, and real estate tends to fall at the midpoint on the earnings scale, while average earnings per job in retail trade and services fall much below the midpoint. Based on national Bureau of Labor Statistics forecasts of employment growth by industry, discussed by Personick (1983), it is apparent that the long-term trend is towards higher growth in lower earnings industries than in industries either at the midpoint or above average in earnings. In 1979, 40 percent of nonfarm wage and salary

employment was found in industries with above-average earnings. By 1990, even though total employment is growing, the percentage of employment in high earnings industries will slip to 37.2 percent. Industries at the midpoint in earnings will drop 1 percent to 21 percent of nonfarm employment with services and retail trade climbing to 41.9 percent of all employment. Just as new homes are smaller than they were before the recession of 1980, and standard-sized cars are far more fuel efficient and weigh less than just a few years ago, requiring fewer resources for their construction and maintenance, so too, job growth today does not quite have the same economic impact or the same meaning that it has traditionally had.

In summary, with interest rates and inflation rising slowly and in tandem, real interest rates (interest rate - inflation rate = real interest rate) are likely to remain high by historical standards through 1986. Even under these circumstances, employment, at least nationally, should continue to grow with the unemployment rate ranging between 7.5 and 8 percent. Demand for the goods and services of the region and North Dakota should be stimulated, at least to some degree, by the national recovery. But because of the weakness of North Dakota's ties to the demand side of an expanding economy, North Dakota's future may be guided more by long-term trends than by the more immediate and apparent dynamics of the business cycle.

III. THE REGIONAL CONTEXT

National forecasts are useful in some ways in understanding the current situation and future of the North Central Plains states. Individual states within the North Central Region are all subject to similar constraints and stimulants to their individual economies. In addition, neighboring states can act as a stimulus to certain sectors of North Dakota's economy. Neighboring states, to a significant degree, affect our tourism industry; act as customers for some of our durable manufactured goods such as farm machinery; consume electricity generated in North Dakota; and influence employment in the transportation industry and supporting services. Neighboring states also compete for grain cars, labor, and population.

Nonfarm employment growth for 1984 and 1985 is not expected to advance as rapidly in the West North Central Census Region as it is in the country as a whole. 1/ "The highest possible growth is still among the traditional high-growth areas of the South Atlantic, Southwest, Mountain, and Pacific Regions." (Chase, 1983a:5) Even though job growth is expected to be below average by national standards, there is some evidence that the economy of the region is responding in its own unique way to recovery. For example, although the region as a whole lost employment during the last two recessions and ". . . ranked last among the ten Census Regions in new business formations from 1980 to 1982, (it) has experienced a dramatic turnaround during the recovery . . . From January to June 1983, business incorporations increased 11.77 percent in

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1/ The West North Central Census Region includes the states of North Dakota, South Dakota, Nebraska, Kansas, Missouri, Iowa, and Minnesota.

the West North Central farm states . . ." (State of Small Business, 1984:52) [2/] An additional positive aspect in the regional forecast is that although the growth rate for total nonagricultural employment is expected to lag behind the national growth rate, manufacturing employment is expected to advance at a rate greater than half of the regions of the nation. [3/]

Manufacturing is substantially less important to the region's prosperity than is agriculture. And the regional, midsummer 1984, outlook for agriculture is one of continued financial problems for many farmers. According to the analysis of a recent survey of bankers in the region, [4/] most banks ". . . expect farm earnings to remain near year-earlier levels. Just over half . . . expect interest rates to rise, which would increase interest payments on some existing variable-rate loans as well as on new loans. These reasons contribute to many bankers' expectations that problems in farm debt repayment will continue." (Agricultural Credit Conditions:1984) From this perspective, then, conditions for the chief economic sector in the region are expected to be no better this year than last year.

[2/] From 1981-1982, nonfarm employment declined by 3.02 percent in the region but by only 1.86 percent for the nation. During 1983, employment in the region declined a further .64 percent, or more than three times faster than the national experience. (Data--Chase 1983a:13)

[3/] On a narrower employment front, a comparison of trends from 1979 to 1987 in 8 declining "smokestack" and 10 growing "high technology" industries shows that the West North Central Region is expected to experience a net gain in employment (high technology growth - smokestack decline = net growth) of 0.9 percent per year. In 1979, less than 8 percent of the region's employment was considered to fall into the category of smokestack industries, which includes farm machinery manufacture, and less than 10 percent of the employment was found in high technology industries which includes, for example, firms producing electronic components and accessories. Of the remaining regions, four are expected to have net employment growth above 1 percent per annum, a second region will share the West North Central's 0.9 percent growth rate, and the remaining three regions are expected to either grow slower or suffer a net loss. (See Industrial Outlook, 1984:39-45)

[4/] The survey refers to the Ninth Federal Reserve District which includes North and South Dakota, Minnesota, Montana, northwestern Wisconsin, and the Upper Peninsula of Michigan.

During 1982, net farm income for the nation stood at $22.1 billion with $25.6 billion being the average net farm income for the preceding eight years. The United States Department of Agriculture's estimate of net farm income for 1983 falls between $20 billion and $22 billion with the midpoint forecast for 1984 at $32 billion. (Data--Agricultural Outlook, 1984:23) The large increase in income forecast by USDA is predicated on the assumption that the value of inventories will rise rapidly during 1984, rather than on the assumption that cash income from farm marketings will see a substantial increase. Cash receipts from the marketing of crops declined from $74.4 billion in 1982, to an estimated $72 billion in 1983. USDA forecasts an income range for crops of $70 billion to $74 billion for 1984. Other forecasts are more optimistic on the income end of the scale, with crops expected to bring in $82.3 billion and $85.2 billion for 1984 and 1985 respectively, but are also more pessimistic on the expenditure side of the equation. The amount spent by farmers to achieve the higher income levels of 1984 and 1985 ". . . are forecast to increase at a faster pace than producers' income." (Chase, 1984a:B.55) At least nationally, the farm economy is likely to be hard-pressed through 1985.

One of the chief sources of difference in agricultural outcome forecasts appears to stem from forecast assumptions made with respect to the volume of exports. USDA, for example, expects the value of exports to rise from $34.8 billion in 1983 to $38 billion in 1984. (Agricultural Outlook, 1984:22) A second assessment puts the 1984 export forecasts at $37 billion, down substantially from 1981 when exports were $44 billion and net farm income was 43 percent higher than the USDA estimate for 1983. (Data--Rural Development News, 1984) Even the modest difference of $1 billion in forecast results will be important to North Dakota and the other states in the West North Central Region. Six of the seven states in the West North Central Region are ranked among the ten leading agricultural export states in the nation. With $1.3 billion in exports during 1982, North Dakota ranked ninth among the states in the overall value of agricultural exports. (Data--Wisner and Chase, 1984:42)

While the expected export volume for 1984 represents an improvement over 1983, the improvement has not slowed the worldwide buildup of inventories and the depressing effect these inventories have on both current commodity prices and the near-term future export market.

The ". . . (1) recent strength of the U.S. dollar, and (2) debt burdens of several important grain importing . . . nations" are two of the most often cited reasons for the current slowdown in the export of agricultural commodities. "In some foreign markets, prices to foreign users have increased substantially despite the drop in the U.S. prices in late 1982 and early 1983." Although the value of the dollar is expected to decline moderately against a few European currencies, the attempt by food importing nations to better manage their debts will slow the growth of foreign demand ". . . for farm products in the two- to four-year adjustment period ahead." (Wisner and Chase, 1983:20-21) Strong agricultural export barriers are likely to be a major factor in the agricultural economy of the Northern Plains states for the duration of the forecast period.

Net farm income in the region is likely to rise during 1984. But not all states will benefit equally since income will rise in response to commodity-specific increases in price, production, or both. The overall rise in net farm income predicted for 1984 by USDA is based on ". . . stronger crop and livestock prices, income from the distribution of the 1983 PIK commodities . . . moderate price increases for inputs . . . more normal crop production . . . up significantly from the drought-reduced 1983 level." (Agricultural Outlook, 1984:12) The West North Central Region Corn Belt states affected by last year's drought should see an improvement in production-based income. But the change in economic conditions will be too late for many farmers. "According to our survey (of bankers)," reports the Federal Reserve Bank of Minneapolis, "the number of farmers going out of business because of financial stress has . . . risen in recent months . . . financial problems put 3.4 percent of district farms out of business between October 1983 and March 1984 compared to 1.7 percent in the previous six-month period . . ." (Agricultural Credit Conditions, 1984) In addition, since the forecasted upturn in net farm income is commodity specific rather than general throughout the agricultural economy, North Dakota may not fare as well as other states in the region, especially since the major commodity produced in the state, wheat, could quite likely see its fourth consecutive year of price decline.

IV. AGRICULTURE IN NORTH DAKOTA

Gross farm cash income in North Dakota rose each year from $1.97 billion in 1977 to $3.2 billion in 1982 with the exception of the 1981 period when it declined 0.8 percent. With the exception of one year's decline, the average increase in gross cash income between 1977 and 1982 was 13.6 percent.

But what farmers/ranchers were spending on farm operations increased even faster. With the exception of the 1980 drought year, when the purchase of farm inputs declined 1.5 percent, spending on farm operations rose an average of 14.8 percent per year.

To add to the problem of declining net income, gross income and expenditures did not rise at the same even pace during each year. Unequal rates of change caused net farm proprietors' income to vacillate an average $\pm$ 87 percent from one year to the next. The peak net income year for proprietors (even though cash received declined, the value of crop and livestock inventory surged) of $792 million in 1981, for example, was greater than the net income for the two preceding years and four times as large as it was in 1977. (Data--Bureau of Economic Analysis, April 1984 microfiche) From 1977 to 1982, expenditures rose faster than sales and government income. At the same time, wide variations from year to year in the rate of increase in gross income, as compared to the amount spent on farm inputs, created an occasional feast but more frequent famine in net farm income.

As a consequence of declining and erratic net farm income, North Dakota lost almost twice as many medium sized farms between 1978 and 1982 as it did the previous four years. Between 1978 and 1982, the number of farms between 50 and 1,999 acres in size declined by 4,815 (a loss of 14 percent) to 29,557. 1/ From 1974 to 1978, on the other hand, 2,795 medium sized farms were lost, a decline of 7.5 percent.

With so many medium sized farms on the market and other parcels of land offered for sale to offset declining farm income, the value of farm land declined to ". . . $420 per acre in November 1983, a decline of

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1/ See Table 7 in the Appendix for more refined data and related information from the 1982 Census of Agriculture.

3.4 percent from 1982 . . . a total decline of 7.5 percent since November 1981." (Johnson, 1984:3) The decline in land values has further constrained the agricultural sector's ability to finance its operations because ". . . falling land values reduce the value of farm assets . . . (that can be used) . . . as collateral to obtain new loans." (Agricultural Credit Conditions, 1984)

As North Dakota's major export industry, agriculture's impact on the economy can be measured in terms of the amount of money spent to produce agricultural products and the amount of money left over from farm sales to spend on the maintenance of the farm family.

Of the two sums, what farmers/ranchers spend as production input and on marketing is far more important to the state's overall economy. These expenditures affect such industries as wholesale trade, manufacturing, transportation, and building construction. Net farm proprietors' income, on the other hand, is more likely to be spent in such industrial sectors as retail trade, special trades construction, and services. In terms of volume, farmers/ranchers spent $1.969 billion in 1978 to put in a crop and manage their livestock operations. This amount was equivalent to 92.6 percent of the gross earnings paid to the state's 223,683 job insurance covered wage and salary workers that year. Our most recent data indicates that farmers/ranchers spent $2.855 billion in 1982 on farming operations, an amount equivalent to 85.1 percent of the gross earnings of covered wage and salary workers. 2/ In contrast, net farm proprietors' earnings are modest. Farm proprietors' income dropped from almost $800 million in 1981 to $440 million in 1982--in either case, much less than the billions spent on farm inputs.

With the introduction of the Payment In Kind (PIK) Program in 1983 (an attempt to reduce crop inventories through acreage planting reductions), farm production expenditures decreased while net farm income in North Dakota rose to $620 million. 3/ (Projection--Chase, 1983b:WNC-33) Net farm income rose during 1983, positively affecting selected

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2/ See Table 22 for covered earnings data.

3/ In 1983, the state's farmers planted only 7.3 million of their 12.6 million acre wheat base under the PIK Program.

industries. On the other hand, the reduced amount of money spent on farm inputs served to help reduce employment in the wholesale trade industry. Not only how well, but how the farm economy performs has a strong influence on nonfarm employment.

Net farm proprietors' income in 1984 is expected to rise to $720 million, or by 16.1 percent, and then to increase to $810 million according to one forecast. (Chase 1983b:WNC-33) But consecutive years of net farm income increase in North Dakota have been unusual in recent history, and three consecutive years of income increase have not been encountered since the 1970 to 1973 period. Moreover, the problems of large inventories and the inability of third world importing countries to purchase agricultural commodities are likely to keep prices low for the next few years.

Among all types of farm income in North Dakota, income from crops has traditionally been the greatest, with livestock and livestock products sales and government payments ranked second and third. Slightly over 40 percent of gross farm income in 1982 was accounted for by the sales of wheat, while oil crops, primarily sunflowers, accounted for 15.2 percent and feed crops accounted for 9.6 percent of all farm income.

According to a USDA early summer report, ". . . wheat growers can expect little relief from . . . low prices in 1984/1985 . . . For world wheat, 1984/1985 is expected to resemble the previous two years: record global production and consumption with near-record ending stocks." (Agricultural Outlook, 1984:6) 4/ USDA indicates that the all-wheat annual average price per bushel was $3.54 in 1983 and forecasts a 1984 wheat price in the $3.20-$3.50 range. On the other hand, current supplies of oil crops are low and prices are expected to rise. "Prices

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4/ Annual Average Price Per Bushel for all Wheat in North Dakota: Farm Reporter, North Dakota Crop and Livestock Reporting Service, various issues.

1975	$4.44	1980	$4.27
1976	3.40	1981	4.22
1977	2.43	1982	3.33
1978	2.74	1983	3.77
1979	3.43		

for sunflower seeds could average $300 a metric ton, a 50 percent rise." (Agricultural Outlook, 1984:8)

In 1982, the marketing of livestock, primarily cattle and calves, accounted for 20.8 percent of gross farm cash income in North Dakota. Prices received per hundred weight rose 1.1 percent from $52.30 in 1982 to $52.90 in 1983, helping boost gross farm income from livestock to $629 million. (Data--Farm Reporter, 1984 & Agricultural Statistics, 1984). At least part of the price increase can be attributed to the increase nationally in the number of people who gain jobs and use their new income to improve their diets. USDA expects choice cattle prices to rise by 4 to 10 percent during 1984 while the volume of beef sold declines (due to a lack of availability) by 1.6 percent. More broadly, cash received nationally from the marketing of livestock and livestock products are forecast to rise by 5 percent in 1984 and by a further 1.4 percent in 1985. (Chase, 1984:B.55) In summary, the prognosis for farm income in the region is generally encouraging, and in North Dakota there appears to be some promise in livestock and sunflowers, but poor prices for wheat can be expected to offset any expectation for a major increase in net farm income during 1984 and quite probably for 1985 as well.

Although the structural elements of high interest rates and restricted export volume are likely to constrain net farm income, expenditures for farm inputs are likely to return to more normal levels during 1984 and 1985. "The 1984 PIK Program is not expected to be received with much of the popularity it gained in 1983 . . . Since North Dakota's total wheat base is 12.8 million acres, 90 percent participation in the basic program leaves approximately nine million base acres eligible to be seeded to a hard red spring, durum, and winter wheat." (Wheat Market Review, 1984) With 1.7 million more acres seeded in 1984 than in 1983, expenditures for farm inputs should attain the $3 billion level during 1984 and exceed that amount (barring the introduction of an attractive acreage reduction program) in 1985. An increasing amount of dollars will be spent by farmers/ranchers on farm inputs during 1984 and 1985, and these expenditures should have a positive impact on selected sectors of North Dakota's economy.

Increased spending on farm inputs can be accomplished by some farmers with little accompanying financial stress. Not all farm/ranch operations are affected in the same way by the constraints of the national/international economy. Commodity-mix and climatic conditions vary across the state, and the financial conditions of long-established farms may not be threatened at all by current circumstances. Comparatively recent data indicates, for example, that a significant minority of farms in North Dakota have no debt at all. In 1979, survey data indicated that 32.2 percent of all farmers/ranchers in North Dakota were debt free (46.2 percent of all farms in the U.S. were debt free). (Data--Census of Agriculture, 1982:2)

At the other end of the spectrum are farmers with substantial existing debt who must also borrow to finance production expenses. Data from the Census of Agriculture on farm operators who have stopped farming between 1978 and 1982 (Table 7) suggests that farm operators with financial problems are most often between the ages of 45 and 54, or are nearing retirement. The data also indicates that although many farmers worked at off-farm jobs, the principle occupation was farming and that operators lived on a farm rather than commuted, for example, from a nearby town.

One solution to the problem of low farm income has been for farm operators and members of their families to supplement their incomes by seeking work in the wage and salary labor market. The data in Table 7 indicates that over one-third of all farm operators work at least part-time at off-farm jobs and other data [5/] suggests that as many as a quarter of farm operators' spouses work at off-farm jobs.

In some instances, off-farm work is essential to the financial maintenance of the farm operation. Indeed, a survey-based study published at about the time the last Census of Agriculture was taken observed that: "For the beginning farm families, over one-half of the males reported an off-farm income during the most recent years . . . The survey would support the conclusion that a certain level of off-farm

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[5/] See Table 9 in the FY 1984 Annual Planning Report.

income is needed for the operation to succeed." (Beginning Farmer Loan Program, 1982:13) But as we will discuss in the next chapter, job opportunities in the wage and salary labor market of rural North Dakota counties have declined between 1982 and 1983 and, presumably, with that decline has come a greater risk of survival for many farm operations.

V. WAGE AND SALARY EMPLOYMENT

Despite the importance of agriculture in the state's economy, most North Dakotans share in that wealth by working at nonfarm wage and salary jobs. Wage and salary jobs are the source of most of the personal income in both the state and the nation. In North Dakota, during 1981, almost 80 percent of all labor-related income, in contrast to interest and transfer payments, was paid in the form of wages and salaries. An additional 20 percent in work-related earnings accrued to proprietors, with almost 60 percent of that $1 billion in earnings in the form of farm proprietor's income.

Wages and salaries, rather than profit for the self-employed, are the source of most personal income in North Dakota. And the vast majority of nonfarm wage and salary jobs are "covered" under the state's Job Insurance Law. In 1981, 83.8 percent of the $3.7 billion in nonfarm wages and salaries were paid to covered employees. Some 10,000 state and local government officials (whose earnings from their government jobs are likely to be minimal), approximately 3,500 church employees, independent insurance agents, railroad employees, the military, and employees of certain nonprofit organizations do not have their jobs insured under state law. The fact that certain jobs are not insured helps explain why there are 16,323 more jobs reported in Appendix Table 9, "Nonagricultural Wage and Salary Employment in North Dakota," than in text Table A, which refers only to covered employment.

In some cases, an individual may hold more than one job. Or, as was discussed in the preceding section, many farm proprietors are employed as farm operators and are also employed in covered wage and salary jobs. For these reasons, the civilian employment estimates (as found in Appendix II) are different than merely the sum of proprietors' employment, and wage and salary jobs.

Civilian labor force estimates, found in Appendix II, are based on a monthly Census Bureau survey of households in North Dakota and across the nation. The Current Population Survey (CPS) interviewed an annual average of 780 households in North Dakota each month during 1983 (or 0.3 percent of the 227,664 households in the state according to the 1980 census).

Sample based estimates, by definition, are subject to sampling error. In 1980, for example, the CPS estimate of the number of persons employed was 293,000. But given sampling error, the estimate could reasonably have been expected to have been as high as 296,000 or as low as 290,000. (Data--Geographic Profile of Employment, 1982:21) The size of the sampling error, then, means that a small change, such as the growth of 1,000 people employed from 1982 to 1983 shown in Appendix II, could reasonably be attributed to sampling error.

Estimates of total nonagricultural wage and salary employment are also based on monthly surveys. Approximately 12 percent of the nonfarm employers in North Dakota participate in the survey. Even with this comparatively large sample and related decline in sampling error, small changes from year to year are likely to fall within the boundaries of sampling error. However, unlike the CPS household survey, many detailed industrial sectors (i.e., more refined classifications of mining, construction, manufacturing, etc.) of the establishment survey are later verified with employer job insurance tax records. Covered employment is used to verify current establishment-based employment estimates.

The following discussion, then, is based on current employment data that is preliminary. Although revisions are to be expected which will affect the slope of the employment trend for 1982 to 1983 in different industrial sectors, these revisions are unlikely to affect the direction of change.

In 1983, our preliminary count of covered jobs (see Table A) indicates that they increased by 4,954 over the year. At 203,057 jobs, covered employment represents the narrowest classification of employment for which analyses are systematically prepared in national and state publications. Since 1981, covered employment information has been collected by place of work (as compared to the more respondent burdensome place of residence), and is used as a core element in estimating total employment by county and industry (such estimates are prepared by the Commerce Department's Bureau of Economic Analysis).

Presented in Table A are covered employment growth totals from 1982 to 1983. Subtotals from county-level data are provided for (a) urban counties in North Dakota, (b) rural counties whose recent employment experiences have been strongly and directly affected by power plant and

lignite mine site construction, and (c) the final subtotal is presented for the remaining 41 rural counties.

The data in Table A clearly shows the direct influence of declining oil prices on mining employment in North Dakota. Covered employment in the mining industry declined by 2,333 jobs from 1982 to 1983. Wholesale trade employment declined, due in part to the drop in oil activity, and also because of reduced use of agricultural inputs (stemming from farmer participation in the PIK Program). Wholesale trade employment declines were greatest in the construction and mining machinery and equipment (Standard Industrial Classification [SIC] 5082) industry, and farm and garden machinery equipment (SIC 5083) industry. The employment decline among trucking and warehousing firms (SIC 42) in the transportation, communications, and public utilities (TCPU) industrial sector can also be attributed to decreased economic activity in the oil industry and the agricultural sector.

Statewide, the largest gains in employment were found in services, construction, government, and retail trade. But more jobs were added from 1982 to 1983 in the three rural counties with lignite-related power plant construction than were gained in the state's nine urban counties. And the urban job growth tended to be in service-producing rather than goods-producing industries. Urban job gains were concentrated in services, government, and retail trade--industries with average to lower earnings per job (see Table 10).

In rural counties, where 27 percent of all covered jobs were located in 1982, the total number of jobs declined by 465 from 1982 to 1983. The losses were greatest in mining, construction, and wholesale trade. These are industries with above-average earnings.

Current estimates and short-term forecasts of wage and salary employment are provided in Table 9 in the Appendix. In most circumstances, covered employment and the estimate of total employment will be the same. However, in contrast to the narrower concept of covered employment, nonagricultural wage and salary employment excludes only jobs worked by the self-employed. In some situations, the estimate of total employment may be substantially greater. The difference between covered employment and nonagricultural wage and salary employment in

Table A
Nonfarm Job Insurance Covered Employment and Change
in Employment by Industry for Urban and Rural Counties in North Dakota, 1982-1983

	Mining	Construc-tion	Manufac-turing	Transport., Commun., & Public Utilities	Whole-Sale Trade	Retail Trade	Finance, Insurance & Real Estate	Services	Govt.	Total
EMPLOYMENT CHANGE 1982-1983										
Urban Counties*	-1,325	57	154	-379	-229	826	215	1,799	952	2,070
Rural Counties	-1,008	1,755	-41	441	-156	541	169	532	651	2,884
SNG Plant Const. Counties**	20	2,276	5	524	21	203	32	203	65	3,349
Other Rural Counties	-1,028	-521	-46	-83	-177	338	137	329	586	-465
State Total	-2,333	1,812	113	62	-385	1,367	384	2,331	1,603	4,954
EMPLOYMENT 1983 P/										
Urban Counties*	3,646	8,556	9,745	9,858	14,169	34,994	8,400	38,089	31,275	158,732
Rural Counties	3,449	8,896	5,276	4,281	6,496	11,961	3,312	13,212	17,442	74,325
SNG Plant Const. Counties**	947	6,097	106	1,700	401	1,124	259	1,314	1,355	13,303
Other Rural Counties	2,502	2,799	5,170	2,581	6,095	10,837	3,053	11,898	16,087	61,022
State Total	7,095	17,452	15,021	14,139	20,665	46,955	11,712	51,301	48,717	233,057
EMPLOYMENT 1982										
Urban Counties*	4,971	8,499	9,591	10,237	14,398	34,168	8,185	36,290	30,323	156,662
Rural Counties	4,457	7,141	5,317	3,840	6,652	11,420	3,143	12,680	16,791	71,441
SNG Plant Const. Counties**	927	3,821	101	1,176	380	921	227	1,111	1,290	9,954
Other Rural Counties	3,530	3,320	5,216	2,664	6,272	10,499	2,916	11,569	15,501	61,487
State Total	9,428	15,640	14,908	14,077	21,050	45,588	11,328	48,970	47,114	228,103

* For purposes of this analysis, urban counties include Williams, Ward, Ramsey, Grand Forks, Cass, Stutsman, Burleigh, Morton, and Stark.

** Synthetic Natural Gas construction counties include McLean, Mercer, and Oliver.

P/ Preliminary

TCPU of 2,023 jobs during 1982, for example, is explained by the fact that railroad jobs are not covered under the state program and, instead, must be estimated from records supplied by railroad firms.

As is illustrated in Table 9, during each five-year period, from 1970 to 1975 and from 1975 to 1980, annual growth in wage and salary employment exceeded 8,000 jobs. With more than half of the data available, we expect that the average annual number of jobs added between 1980 and 1985 to fall in the vicinity of 1,400 jobs per year. Job growth in North Dakota since the drought of 1980 and during the past two national recessions has been exceedingly slow in comparison to historical standards. From 1982 to 1983, the number of wage and salary jobs declined. This was the first time in 24 years that the number of jobs decreased instead of increased. And, as we have suggested in the previous section, the circumstances, in particular those affecting the agricultural sector during 1984 and 1985, will keep job growth below the 1 percent level.

But job growth has not been the primary source of new employment opportunities even during the past decade. The most recent estimates indicate that between 10,000 and 11,000 jobs in North Dakota are open each year due to a replacement need. 1/ Death, disability, and various categories of voluntary withdrawal (such as retirement) from the labor market are responsible for creating the bulk of all job openings.

The fact that so many jobs are created due to replacement need implies that even without job growth the labor market is very active. Approximately 4 percent of all jobs open during each year are due to replacement need. Additionally, even though total employment declined by 300 from 1982 to 1983, an examination of the data indicates that 4,140 new jobs were created in some industries (primarily construction and services) while in other industries the decline in jobs was 4,440. This growth in some industries and decline in other industries involved a further 3.4 percent of all nonfarm jobs in the state. Finally, during the fiscal year ending September 30, 1983, Job Service North Dakota made

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1/ See the forthcoming Job Service publication, "Employment Projections to 1990" (Winter 1985).

35,399 job placements. This level of placement activity attests to the high rate of occupational turnover. Thus, while it is fair to conclude that job growth was negligible during 1983, it is not appropriate to think of the labor market as lacking in dynamics.

The influence of higher wage job loss on the population of rural communities is probably greater than the effects of lower wage job gains on the ability of urban communities in North Dakota to attract population. Indeed, there appears to be sufficient documentation of rural to urban population movements within North Dakota to suggest that rural areas are losing population in much the same manner from 1980 to 1984 as the decenial census indicated was happening during the past decade. Population and labor supply will be discussed in the final section of this report. But, in addition to migration within the state, it should be pointed out at this junction that, for a variety of reasons, average earnings per job in North Dakota are substantially lower than they are for the nation as a whole (see Tables 19-21) and this must be regarded as a factor in the migration of people from the state.

Complicating the answer to the question of North Dakota's involvement in the recovery are several specific and unusual circumstances. First, one major industrial venture, the synthetic natural gas plant construction in Mercer County, has exerted a strong positive influence during 1982-1983 on total employment. And it will exert a strong negative influence during 1984 as construction winds down. The start-up and completion of this plant is quite separate from either the recession or the recovery and, yet, as we have demonstrated, the SNG plant has had a major impact on total employment in the state (see Table A).

Secondly, the recession and the recovery are determined by global economic events, a broad range of federal policies, and a large cross section of market forces--not by one institutional event. However, the PIK Program represents an institutional rather than a market approach to the management of excess supply in grain markets. Institutional forces in the agricultural sector, unsynchronized with the recession/recovery, have helped reduce employment in the state for the first time in 24 years.

Economy-wide conditions in the U.S. recovery are reaching down to the raw material sectors and providing an impetus for employment gains in oil exploration. However, in the face of two national recessions between 1980 and 1983, nonmarket political events were responsible for the rapid employment growth and subsequent decline in mining. Growth in the mining industry is supported by the current general positive economic direction in the national economy. But the oil boom and bust of 1979-1983, which had a major effect on employment in the state, took place quite apart from the two major national recessions.

How North Dakota expects to gain from the current recovery can only be interpreted on the basis of how our economy performed during the recession. Energy development, the boom and bust cycle in oil exploration, and the PIK Program have adopted courses of expansion or decline that have run contrary to the national business cycle.

From 1978 to 1979, nonagricultural wage and salary employment grew by 10,180 jobs and, as can be noted by referring to Table 9, 1979 was the last in a series of high growth years that started at the beginning of the last decade. The decline of 1.1 percent in employment from 1982-I to 1983-I marks 1983 as one of the few documented periods when North Dakota's economy paused before moving on. North Dakota's current employment progress, in response to the national recovery, would appear to best be compared with the high water mark (1979) of the last decade and that point in time when economic circumstances have been most difficult for the state (1983).

Text Table B presents first quarter average employment levels by industrial sector for 1979, 1983, and 1984. Among nine broad industrial classifications, six industries are showing positive growth signs and two others, manufacturing and retail trade, have improved from 1983 to 1984, even though they are not at the employment level they were in 1979. Only two industries, construction and wholesale trade, have experienced further declines from 1983. In contrast, in the first quarter of 1983, only five industries had positive growth signs. In broad terms, in comparing 1983 with 1984, it can be suggested that North Dakota's employment situation is improving.

An examination of Table B shows that employment growth, even during the national recession, clearly took place in such service-producing sectors as finance, insurance and real estate, services, and state government. In this major way, then, North Dakota is sharing in the long-term national trend towards service industry growth. However, the problems of the recession--high interest rates reducing employment in goods producing industries--appears, in many ways, to still be exerting a negative influence on the local economy.

As we have pointed out, a few commodities, rather than the agricultural sector in general, are expected to benefit from the national recovery. Construction, another goods-producing industry, has declined further in 1984, rather than turning itself around. Nationally, construction employment declined by 15.8 percent from 1979-I to 1983-I, and then responded to the national recovery and by 1984-I was only 7 percent below its 1979-I employment level. In North Dakota, on the other hand, construction employment continued to decline during 1984, and it would be closer to 30 percent below its 1979 level were it not for construction employment at the SNG plant.

Nationally, the employment in durable goods manufacture stood at 9.1 percent below its 1979 level in the spring of this year. Statewide, the employment situation was improving, but in 1984-I employment in durable goods manufacture was still 23.6 percent below where it was five years ago. On the other hand, nondurable goods manufacture, presently at 10.9 percent above its 1979 employment level, is outperforming its national counterpart. Nationally, nondurable goods employment is still 4.7 percent below where it was during 1979-I. Also on the bright side is employment in mining. Rising by nearly 600 in employment from 1983-I to 1984-I, it appears that mining is responding to a broad general upturn in the demand for energy in a more active U.S. economy.

In summary, using employment as our measure of North Dakota's response to the national recovery, it appears that the national economy is having a positive effect on only a few industrial sectors within the state. In addition, there is an indication that the service industries in North Dakota will experience at least a certain amount of growth even while interest-sensitive industries experience a decline. This pattern has made its appearance in the national economy as part of a long-term

trend. Finally, because many of North Dakota's agricultural markets are still under the influence of high real interest rates, large debt, and an expensive dollar, the general increase in the national demand for goods and services appears to be bypassing our local economy.

Table B
Nonfarm Wage and Salary Employment by Industry for North Dakota
First Quarter 1979, 1983, and 1984

	1979I	1983I	1984I	Percent Change 79I-83I	Percent Change 79I-84I
EMPLOYMENT BY INDUSTRY	231,840	240,973	244,863	3.9	5.6
MINING	4,817	6,760	7,343	40.3	52.4
CONSTRUCTION	13,307	12,797	12,440	-3.8	-6.5
MANUFACTURING	16,050	14,270	15,037	-11.1	-6.3
DURABLE GOODS	8,007	5,780	6,117	-27.8	-23.6
NONDURABLE GOODS	8,043	8,490	8,920	5.6	10.9
TRANSPORTATION, COMMUNICATIONS AND UTILITIES	15,163	15,767	16,063	4.0	5.9
WHOLESALE TRADE	21,900	19,593	19,070	-3.5	-6.1
RETAIL TRADE	42,343	43,513	44,250	-1.0	0.7
FINANCE, INSURANCE, AND REAL ESTATE	10,693	11,720	11,970	9.6	11.9
SERVICES	46,760	54,717	56,173	14.8	17.8
GOVERNMENT	60,807	61,837	62,517	1.7	2.8
FEDERAL	9,357	9,317	9,513	-0.4	1.7
STATE	16,843	18,397	18,893	9.2	12.2
LOCAL	34,607	34,123	34,110	-1.4	-1.4

VI. NONFARM, GOODS-PRODUCING INDUSTRIES

A. Mining

Total employment in the mining industry fell from its peak of 11,860 jobs in September of 1981, to a low of 6,130 jobs in April of 1983. The number of mining industry job insurance claimants rose from 55 to 1,623 over the same period. The fall-off in employment occurred in oil and gas extraction, with coal and gravel mining remaining largely unchanged over this 20-month period.

With the pace of the boom in oil exploration came bottlenecks in the labor market. Premium wages and overtime pay induced a 13.1 percent increase in average earnings per job in 1980, and a 13.4 percent increase in 1981. The drop in oil prices, however, had the effect of dropping the increase in wages to 2.7 percent in 1982, and resulted in a decline in average earnings per job in 1983 of 2.5 percent. As illustrated in Table 23, earnings per job now are only $1 more per month than they were in 1981. In the aggregate, labor costs to the industry have declined in real terms, helping to push employment to 7,343 during the first quarter of 1984, compared to 6,760 a year ago.

But lower labor costs are not the only incentive to increased oil exploration and development. The cost of most major inputs has declined as fewer operators compete for resources in the production process. "Given current oil prices, there are numerous attractive oil drilling prospects, since the 15 percent decline in oil prices from mid-1981 to mid-1983 was more than offset by a 28 percent decline in drilling costs." (Industrial Outlook, 1984:1-10) With the consumption of all forms of energy expanding at a moderate rate in response to the national recovery, we expect employment in the oil exploration industry to rise gradually during 1984 and 1985.

At a lower rate of employment expansion in oil and gas exploration, wages will not grow at the explosive rate they did during 1980 and 1981, and more efficient technologies will help contain costs. These factors and employment gains in other sectors of the industry should bring annual average employment in mining to 7,700 during 1985 (see Table 9).

Coal production and employment are entering a higher plateau of employment during 1984/85 " . . . (C)oal production in the state has more than doubled in the last seven years to an annual total of 17,805,767.60 short tons in 1982." (North Dakota Geological Survey Newsletter, 1983:8) Over the same period, employment in the coal mining industry rose from an annual average of 631 to 1,230 (+95 percent). The synthetic natural gas plant in Mercer County is expected to begin production in 1984 and will use approximately 9.4 million tons of lignite coal per year. This surge in usage will have a substantial influence on employment in the mining industry. (Data--Final Environmental Impact Statement, 1980:1-14)

Following the expansion period of 1984/85, it is unlikely that coal mining growth will find a similar period of expansion during the remainder of the decade, since the growth rate in the consumption of electricity has been reduced considerably from the last decade. "Sales of electricity grew at an annual average rate of 7 percent from 1960 to 1973, but from 1973 to 1982 the rate of growth was less than 3 percent." (Industrial Outlook, 1984:1-7) However, many capital expenditure programs were planned and implemented with the 7 percent rate of electricity consumption growth in mind, and the industry is presently faced with excess electrical generating capacity.

B. Construction

Near future impetus for growth in the construction industry in North Dakota, therefore, will rest in large part on mortgage interest rates in the homebuyer market and on government contracts, since utilities are presently burdened with electrical generating capacity which they cannot sell.

Employment in heavy construction at the ANG plant in Mercer County alone, not including the other power plant construction workers, accounted for two-fifths of the employment in heavy construction during 1982 and three-fifths of all heavy construction

in 1983. [1] Had it not been for the synthetic natural gas plant construction employment, total construction would have declined in each year since 1979.

In 1979, when conventional mortgage rates were at 10.78 percent (U.S. average), general building and special trades construction stood at an employment level of 13,990. By 1982, when interest rates reached 15.14 percent, employment in these two subsectors had declined to 9,850. With mortgage interest rates declining to 12.57 percent in 1983, general building and special trades each employed slightly more people with a combined total for the two industries of 10,130 jobs.

With mortgage interest rates rising in the spring of 1984 and expected to rise slowly through the forecast period, one forecasting service has indicated that at slightly over 7,000 housing starts, 1983 would be the high-water mark for the 1980-85 period in North Dakota. (Chase 1983:WNC33) Housing starts are expected to decline and be in the vicinity of 6,000 to 6,500 for 1984 and 1985. Housing starts in this range represent a home building volume nearly twice as large as it was during the 1980-1983 period.

With this spring's rise in interest rates, and the decline in heavy construction employment anticipated for the fall of 1984, it is

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[1]

	Total Construction Employment				Construction Employment Excluding SNG Work Force			
	1979	1981	1982	1983	1979	1981	1982	1983
Gen. Bldg. Const.	5,680	3,900	3,670	3,740	5,680	3,900	3,670	3,740
Heavy Const.	4,680	4,310	5,800	7,310	4,680	3,908	3,665	2,838
Special Trades Const.	8,310	6,730	6,180	6,390	8,310	6,730	6,180	6,390
TOTAL	18,670	14,940	15,650	17,440	18,670	14,538	13,515	12,968

expected that annual average construction employment will not exceed 15,200 in 1984, nor 15,400 in 1985.

Construction employment has not risen as sharply in North Dakota as it has nationally. The increase in employment has been gradual and, as indicated in Table A, employment has grown slightly in urban areas where there was an annual average of 8,556 jobs during 1983, compared to 2,799 covered jobs in rural (non-SNG) counties. It is expected that a greater proportion of the expected employment growth will occur in urban, as compared to rural, counties.

C. Manufacturing.

The mining industry is concentrated in the western third of the state, and recent employment change in the construction industry has been strongly affected by a single development site--the synthetic natural gas plant. In two respects, the manufacturing industry is unlike either mining or construction: employment is disbursed across the state, concentrated largely in urban centers, and changing slowly.

With 9,745 jobs, or 64.9 percent of all covered manufacturing jobs in urban counties (see Table A), employment in this industrial sector is the most urbanized of the goods-producing industries.

The average monthly wage in manufacturing in 1983 was $1,432 per month (see Table 23), earnings equivalent to approximately 77 percent of average earnings in construction, or 69 percent of the average pay in mining. The rate of growth in earnings per job has slowed in goods-producing industries, and manufacturing has been no exception. After growing at a rate of better than 9 percent in 1980 and 1981, average earnings per job declined to a 7.4 percent rate of increase during 1982, and a 2.5 percent rate of increase during 1983.

Manufacturing employment has declined in each year since 1979, dropping gradually from 16,650 to 14,820 jobs (-1,830) in 1983. But the change in employment has not been evenly shared between the two major divisions of this industrial sector, with durable goods employment declining by 2,550 jobs, while nondurable goods employment has increased by 720 jobs.

The decline in durable goods manufacture has been largely restricted to employment in the manufacture of farm equipment (SIC 35-nonelectrical machinery) which lost 2,010 jobs, absorbing 78.8 percent of the job loss in durable goods manufacture. Nondurable goods job growth has been more generalized. Between 1979 and 1983, the number of jobs grew by 170 in printing and publishing (SIC 27), 250 in food and kindred products (SIC 20), and 300 jobs distributed to a variety of nondurable sectors.

Several factors are at work in the farm machinery manufacturing industry that are having, and will continue to have, an effect on local employment. Overlaying these factors are long-term industry trends that place the farm machinery industry squarely into the category of U.S. "smokestack" industries; i.e., slow growth heavy industries.

There are several factors at work influencing the volume and nature of demand for farm machinery that will affect local employment in 1984 and 1985. Increased crop production in recent history has necessitated the development of on-farm shipment and handling equipment, influencing the demand for larger and more varied types of equipment. Accompanying expanded production has been a diversification in major crops. This diversification has precipitated the development of unique, commodity-specific machinery which in turn has become the focus of specialty export markets. Into this more than decade-long trend stepped the 1983 PIK Program with reduced acreage and, therefore, reduced farm machinery needs. During 1984 and 1985, as many of those acres that were held out of production will again be cultivated, the demand for farm machinery both in the state and around the region is expected to increase. Another factor affecting the demand for farm machinery is the emphasis on small grain production worldwide. As was noted earlier, worldwide grain production has expanded rapidly during the past decade, and this has opened new markets for farm machinery export from North Dakota.

In addition, two other factors stemming from rapid increases in energy prices have affected the evolution of the farm machinery market and manufacturing in North Dakota. Development of the unit

train for the shipment of grain from highly centralized subterminal elevators has affected the technology farmers are required to employ in merchandising their grain over longer farm to elevator distances. And finally, an emphasis on energy-saving cultural practices has brought about a greater interest in no-till and minimum-till technology and the machinery. Each of these factors has meant that the manufacturing firm in North Dakota has often been under pressure to adapt quickly to new markets.

Even though the farm machinery sector is under pressure, the data from the first quarter of 1984 (Table B) suggests that the durable goods industry has at least stopped the decline that was started in 1980. On the other hand, the rate of growth is slow and a return to the 1979 level of employment is uncertain.

One of the main reasons that durable goods manufacture is on an extremely slow growth path is the suggestion that it is falling into the mold characteristic of the American automobile manufacturer. Just as American automobile manufacturers have abandoned the domestic manufacture of small cars, so too have American farm machinery manufacturers limited themselves to the production of large tractors:

> "Tractors are the industry's largest source of revenue. By 1977, the U.S. industry had ceased production of farm tractors under 40 horsepower, abandoning this market to Japanese imports. Many of the imports carried the nameplates of major U.S. producers. With a few exceptions, the United States is halting production of all farm tractors under 100 horsepower. U.S. manufacturers will obtain tractors between 40 and 100 horsepower from European subsidiaries.
>
> During 1983, retail unit sales of farm tractors under 40 horsepower amounted to 42 percent. For tractors with 40 to 100 horsepower, unit sales amounted to 32 percent, and for tractors with 100 horsepower and more, 26 percent. This suggests that in the future, unit sales of U.S.-produced tractors may level off to 25 percent of the market." (Industrial Outlook, 1984:23-2)

Large tractors require a substantial financial outlay, an outlay that's easily curbed by high interest rates. Increased reliance on large tractor sales, then, represents an added difficulty in inducing durable goods manufacturing employment in North Dakota.

The consumption of nondurable manufacturing goods, on the other hand, does not require consumer indebtedness, and employment in this sector has grown since 1979 despite two national recessions. Further growth from this sector is expected during 1984/85 since more jobs in the U.S. economy leads to greater consumer expenditure on foods processed by North Dakota industries.

"Demographic changes are the major driving force behind food consumption and expenditure (however), (p)opulation growth in the United States (has slowed, and) . . . (o)ther demographic changes--more elderly persons, more single-person households, plus a trend toward smaller families . . ." are producing marked shifts in the demand for many products. (Industrial Outlook, 1984:38-1)

Continuing growth in employment in nondurable goods in the face of national recovery is not guaranteed since demographic change may intervene to alter consumption patterns. If a new generation of firms or product lines fails to replace slow growth or consolidating industries, employment declines could come to characterize this industry. In addition, the introduction of new management efficiencies and technologies in the processing field will mean that more and more can be processed with fewer and fewer employees.

The value of shipments (U.S.) of industries typical of North Dakota's nondurable goods firms shows that not all markets are expanding at an equal rate. 2/* The value of pasta product shipments nationally, for example, increased three times faster than the value of fluid milk shipments between 1979 and 1983. The value of shipments can rise faster than employment because of greater consumption, inflated values, and increases in productivity. But it is apparent that some industries are on a sustained and stronger growth pattern than others.

Many of the establishments recently built in North Dakota are producing in high growth commodities and it appears that expansion and employment gains among these firms will more than offset employment declines among slow growth industries. In total, annual average employment in manufacturing is expected to reach an annual average of 15,300 during 1985 as compared to 14,820 in 1983.

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* See footnote on next page.

2/

VALUE OF SELECTED FOOD AND KINDRED PRODUCT
INDUSTRY SHIPMENTS (U.S.)
(MILLIONS OF DOLLARS)

SIC	INDUSTRY	1979	1981	1982	1983	Percent Change 1979-83
2011	Meat Packing Plants	43,191	44,570	45,385	46,258	7.1
2013	Sausages and Other Prepared Meats	9,830	10,887	11,437	12,019	22.3
2016	Poultry Dressing Plants	7,409	9,044	8,252	8,327	12.4
2017	Poultry and Egg Processing	1,209	1,408	1,461	1,487	23.0
2021	Creamery Butter	1,046	1,258	1,305	1,268	21.2
2022	Cheese, Natural and Processed	7,654	10,429	11,889	12,846	67.8
2026	Fluid Milk	15,524	17,512	17,753	17,780	14.5
2063	Beet Sugar	1,348	1,873	1,812	1,822	35.2
2076	Vegetable Oil Mills, Excluding Corn, Cottonseed, and Soybean	398	582	476	487	22.4
2083	Malt	538	743	786	811	50.7
2098	Macaroni, Spaghetti, Vermicelli, and Noodles	705	930	973	1,489	48.8

SOURCE: U.S. Industrial Outlook, 1984:38-2

VII. SERVICES-PRODUCING INDUSTRIES

Employment and earnings in agricultural and nonagricultural goods-producing industries have been strongly affected by high interest rates and unique events. Over the 1980-1983 period, broad swings in employment have been less apparent among private sector services-producing industries and government.

In some situations, there is a direct link between a goods-producing and a services-producing industry. The direct link between agriculture/mining and employment in the wholesale trade was highlighted in previous sections. In addition, as illustrated in Table 9, the employment downturn in the transportation, communications, and public utilities sector (TCPU) is also associated with economic activity in certain industries. TCPU is strongly linked to agriculture, the mining industry, and the housing industry. The major industrial division in TCPU is trucking and warehousing (SIC 42). Thus, through firms strongly connected to wholesale trade (i.e., the shipment of agricultural inputs and grain) and the movement of building materials for the construction industry, employment in TCPU is strongly affected by a number of goods-producing industries.

The volume of home building activity also influences employment in another sector of TCPU. Public utilities and economic activity related to the installation of communications equipment in new homes and establishments are also affected by the construction industry. Finally, during 1980-83, employment in TCPU was substantially affected by the consolidation of the major railroads serving the state.

With renewed construction activity in the state and nation during 1984-1985, employment in TCPU should rise slightly as more building materials are distributed to wholesalers in North Dakota, and as more building materials are shipped from the Pacific Northwest through North Dakota to population centers in the Ohio Valley and on the East Coast.

Employment change in TCPU has a much greater impact on subsequent economic activity than the change in the number of jobs might suggest, since earnings in this industry tend to average nearly as much as they do in the construction industry. Earnings per job and productivity are

expected to rise faster than employment in 1984-1985 as employers require more hours of work from experienced employees rather than hiring inexperienced workers. Thus, in wholesale trade, we expect to see employment grow by only 0.4 percent from 1983 to 1984, while average earnings per job of $1,448 advance rather than decline as they did from 1982 to 1983 (see Table 23).

Increased weekly hours of employment and, therefore, increased average earnings per job in TCPU and wholesale trade should have a subsequent benefit or ripple effect on other industries as employees spend their income in other areas of the economy.

Although employment in wholesale trade represented only 8.9 percent of all covered employment during 1983, employees in that industry were paid 10.3 percent of all covered earnings. Thus, from an economic standpoint, employment in wholesale trade is nearly as important as it is in the retail trade industry which paid 11.4 percent of all covered wages. From a social standpoint, however, the retail trade industry may be more important since it was responsible for 20 percent of all covered jobs during 1983.

Like TCPU and wholesale trade, retail trade has not progressed in a straightforward fashion during the 1980-1983 period. Employment in retail trade declined by 1.6 percent in 1981, rose by 0.3 percent in 1982, and then it declined again in 1983 to an annual average of 45,420 jobs. From an economic standpoint, job growth or decline in the retail trade industry is perhaps the least important since average earnings per job in this industry are the lowest of all service-producing industries (see Tables 10 and 23). However, employment in retail trade represents one-fifth of all covered employment. And job opportunities in this industry are often part time or temporary, meeting the work schedules of individuals who do not want full-time work. (Alternatively, for some people, these jobs may be an inadequate substitute for a more desirable and/or needed full-time job.)

During 1983, 47.4 percent of all covered jobs in retail trade were paid at or below the minimum wage. Retail trade had the highest rate of low earning jobs, with only 19 percent of all wage and salary jobs falling into this category. Earnings at or below the minimum wage are

indicative of a large number of part-time jobs in the industry. (But there are other reasons: low hourly rates of pay, temporary employment, and individuals working for more than the minimum wage but for fewer than the three months of the quarter in which job insurance employer reports are filed with Job Service North Dakota.) Low paying, part-time jobs have little of the economic impact that goods-producing jobs have, or other jobs in TCPU or wholesale trade for example.

Demonstrating a steadier growth pattern is employment among firms in the finance, insurance, and real estate industry (FIRE). From 1980 to 1983, employment in FIRE grew at an average rate of 1.3 percent per year or by an average of 147 jobs, and we expect that pattern to continue through 1985. The bulk of the increase in the number of jobs has been in the banking industry. Insurance carriers and other financial establishments have continued to increase as well. On the other hand, in comparison to the strong housing construction year of 1979, employment in real estate (SICs 65, 66, and 67) has declined by 6.6 percent to an employment of 1,710.

The broad collection of firms referred to as the services industry has, unlike other industries in the services-producing sector, continued to expand in employment from 1982 to 1983 at much the same numeric rate that it did during the previous decade. As is indicated in Table 9, employment in the services industry grew by 2,058 jobs per year from 1975 to 1980 and, from 1980 to 1983, employment growth averaged 2,083 jobs. By 1985, we expect the services industry will have reached an annual average employment level of 57,300 and will be a leading source of new jobs in North Dakota.

The services industry is comprised of several distinct subsectors in which the product is intangible. Hotels, hospitals, nursing homes, and a variety of business and personal services are found in this broad industrial cluster.

One of the larger major employment subdivisions that we expect to see positively affected by the national recovery is the "Hotels and Other Lodging Places" sector. In 1979, this industry employed 4,310 individuals. It grew steadily to 4,700 in 1982 and stayed very near that level in 1983. In 1984, we expect to see this sector (SIC 70) begin its pattern of slow expansion again.

Affected more by demographics than the business cycle, employment in the nursing and personal care sector (SIC 805), which includes such skilled nursing care facilities as nursing homes, has expanded at an annual rate of 2.9 percent since 1979. In 1983, nursing and personal care services employed 5,780 persons. Based on projections of the population from the 1980 Census, approximately 800 persons are reaching age 65 each year, and older individuals are the prime users of skilled nursing care facilities. Moreover, with indications that longevity will continue to expand, it would appear that this industry has an added impetus for growth.

Annual average employment growth among North Dakota hospitals has been 5.1 percent per annum between 1979 and 1983, while total wage and salary employment growth has averaged only 1 percent. Part of the explanation for an employment growth rate five times faster than total wage and salary employment growth rate lies, just as it does in the nursing and personal care sector, in demographics. But many hospitals in North Dakota rely on the Social Security Administration's Medicare/Medicaid Program for a substantial portion of their income. The Medicare/Medicaid Program is presently undergoing a process of rationalization in health care costs containment that is reducing anticipated hospital income. Consequently, employment growth in this industry cannot be expected to maintain its current rate of 5.1 percent per annum.

A broad range of other services is also expanding. Taken collectively, the monthly published "All Other" category of service industries involved 26,410 jobs in 1983. The "All Other" sector includes business, legal, educational, repair, and social services in addition to other types of firms and had grown at a rate of 3.7 percent a year from 1979 to 1983.

To some extent, employment growth in these business and personal service industries is dependent upon general population growth and sustained increases in employment and earnings among goods-producing industries. Current conditions indicate that the rate of growth and the demand for these types of services have decreased since 1982 (see Table 22) and that further growth will be patterned on a more gradual rate of increase.

The services industry is an expanding industry, and because of its unique economic ecology, we can anticipate some of the broader changes taking place throughout North Dakota's labor market. Employment in the services industry is predominantly low wage, located in urban counties, and staffed by female employees.

Earnings in the services industry tend to be paid at a rate higher than the minimum wage, but lower than the average wage for the state. Statewide, 19 percent of all jobs were paid at or below the minimum wage in 1983. In retail trade, 47 percent of all jobs were comprised either of low paying and/or temporary jobs; and in services, 27.5 percent of all jobs fell into this category. But average earnings per job of less than a thousand dollars per month (in 1982--see Table 10) in the services industry were only 82.1 percent of the average for the state ($1,217/month in 1982). Thus, jobs in the services industry have a lower average earnings per job not because of the temporary or part-time nature of the work, which it often is, but because a substantial proportion of the jobs (42.9 percent in services as compared to 32.4 percent in all industries) are paid at a wage scale that is higher than the minimum but lower than the average for the state as a whole.

Data from the 1980 Census reveals that the services industry is the single largest employer of females in the state. Data in Table C of the next chapter indicates that 46.7 percent of females with work experience gained that experience in the services industry and that 47.8 percent of the females who worked full time during 1979 did so in the services industry. Even though there are fewer females than males in the experienced labor force (1.5 males/female--1980), females dominate the services industry by nearly two to one.

Employment in the service-producing industries is found primarily in urban counties. In 1980, 57.6 percent of North Dakota's population lived in urban counties, but the proportion of employment from service-producing industries substantially exceeds that majority. Employment in the retail trade industry is the most urbanized with 74.5 percent (1983) of its covered employment in urban counties. Employment in the services industry is ranked next with 74.2 percent of the jobs in this industry found in urban counties. With most new jobs during the first half of

the current decade falling into the services industry, growth in North Dakota's labor market would appear to be synonymous with low wages, female employment, and urban, rather than rural, job opportunities.

Much of the employment growth in the service-producing industries is related to population growth. And with urban areas growing and rural areas declining in population, the greater proportion of the need for services expansion is occurring in urban areas.

Some of the demographic pressure for increased government employment stems from the migration of people from North Dakota's rural areas to its urban counties. Pressure for growth is induced in urban areas as migrants move to cities. At the same time, rural areas are reluctant to discard institutions and the related government employment that once served a broader population base more economically. Government employment is least sensitive to market factors, and with 64.2 percent of the employment in urban areas, is the least urbanized of all employment in the services-producing sector.

Employment in government declined from 1980-1982 but then grew during 1983. The pattern of change has not been distributed evenly across all sectors of government. Both federal and local government have declined while state government grew by almost 10 percent between 1980 and 1983. The federal employment decline was modest (-150) in comparison to the decline in local government (-890). State government employment growth took place (for 1982-1983 data, see Table A) in urban areas with major institutions of higher learning showing growth as the final cohort of the ""baby boom"" generation entered college. In rural areas, state government employment grew at the State School at Grafton and in specialized post-secondary schools in rural counties.

As the "baby boom" generation left high school at ages 18 and 19 during the 1981-83 period, the need for employment in local education, especially in rural areas, also declined. On the other hand, the children of the older members of the "baby boom" generation (the oldest being 37 in 1984) were entering the ninth grade in 1983, creating a greater need for local (in particular, urban) employment. The pressure for employment growth in local education, especially in urban areas as more children enter the primary grades, should help stem the decline in

local government employment. Employment at the federal level is expected to remain nearly constant over the 1984-1985 period, and the rate of growth in state government (18,040 in 1983 as compared to 16,460 in 1980) is expected to slow. Thus, the rate of employment increase for the entire sector is expected to be slightly lower than for the state as a whole during 1984-1985.

Table C

Industry of the Experienced Civilian Labor Force and Usual Employment by Sex for Persons 16 Years of Age and Older

Industry	Experienced Civilian Labor Force 1980						Usually Worked Full Time in 1979					
	Male		Female		Total		Male		Female		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Agriculture, Forestry and Fisheries	38,279	22.0	4,100	3.6	42,379	14.7	33,899	23.1	2,652	4.0	36,551	17.1
Mining	5,905	4.0	466	0.4	6,371	2.2	5,426	3.7	344	0.5	5,770	2.7
Construction	21,724	12.5	1,787	1.6	23,511	8.2	16,444	11.2	1,000	1.5	17,444	8.2
Manufacturing	12,615	7.2	4,624	4.1	17,239	6.0	10,971	7.5	3,172	4.7	14,143	6.6
Durable	6,456		1,853		8,309		5,744		1,430		7,174	
Nondurable	5,709		2,541		8,250		4,842		1,570		6,412	
Transportation, Communications & Public Utilities	17,677	10.2	4,405	3.9	22,082	7.7	15,752	10.8	3,209	4.8	18,961	8.9
Wholesale Trade	11,436	6.6	2,753	2.4	14,189	4.9	10,399	7.1	1,848	2.7	12,247	5.7
Retail Trade	24,071	13.9	28,675	25.2	52,746	18.3	18,221	12.4	12,931	19.3	31,152	14.6
Finance, Insurance and Real Estate	5,540	3.2	7,224	6.3	12,764	4.4	4,862	3.3	5,269	7.9	10,131	4.7
Services	27,988	16.1	53,220	46.7	81,208	28.2	23,189	15.8	32,026	47.8	55,215	25.9
Business and Repair Services	5,333		2,096		7,429		4,446		1,109		5,555	
Personal Services	1,829		7,598		9,427		1,317		3,847		5,164	
Entertainment and Recreation Services	997		815		1,812		556		350		906	
Professional and Related Services	19,829		42,711		62,540		16,870		26,720		43,590	
Public Administration	8,295	4.8	6,245	5.5	14,540	5.1	7,385	5.0	4,553	6.8	11,938	5.6
Federal Government	3,689		2,581		6,270		3,321		1,667		4,988	
State Government	1,975		1,860		3,835		1,787		1,505		3,292	
Local Government	2,631		1,804		4,435		2,277		1,381		3,658	
Experienced Unemployed Not Classified	187	0.1	369	0.3	556	0.2	-		-			
Total	173,717	100.0	113,868	100.0	287,585	99.9	146,548	100.0	67,004	100.0	213,552	100.0

Source: "1980 Census of Population; Detailed Population Characteristics" PC80-1-D36 (Vol. 1, Chapter D) November 1983

VIII. POPULATION AND LABOR FORCE

Based on Current Population Survey (CPS) estimates, North Dakota's civilian noninstitutional population aged 16 and over grew by 3,000 persons to 484,000 in 1983 (see Tables 5 and 6). This is the population normally thought of in discussions of the labor force but, in addition, there are 10,000 plus individuals in the military, hundreds institutionalized, and nearly 170,000 children aged 15 and less. The total population of North Dakota, projected to 1985, is presented as Table 1 in Appendix I. In 1985, our population is expected to be in the vicinity of 671,000, progressing at a rate just under 0.6 percent per year--the growth rate experienced from 1970 to 1980.

North Dakota's population is becoming older, more urbanized, and is under renewed pressure to emigrate from the state. And an increasing proportion of its citizens are reaching that age (20+) when the decision to migrate is made. Table 1 in Appendix I indicates the aging pattern of the population under a situation of moderate net out-migration resembling what occurred between 1970-1980. The projection suggests that the total population of 16-24 year-olds is declining dramatically as the last of the postwar "baby boom" generation leaves high school and enters the labor force (or for many, the armed services). The decline of 16 percent in the number of youth in the state between 1980 and 1985 is mirrored in the CPS household sample-based estimates of the population. In comparing the data in Table 5 with that in Table 6, it can be seen that the number of youth declined by more than 4,000 from 1982 to an annual average of 105,270 in 1983. At the same time, the number of individuals aged 25-44 expanded to almost 180,000. The last of the "baby boom" generation was born in 1964 and the aging process is raising the average age of the state's population.

It has been demonstrated that job opportunities are becoming more urbanized in North Dakota and so is its population. In 1970, 53.4 percent of the state's population (329,718) lived in nine urban counties. By 1980, this proportion had reached 57.6 percent

(375,863). Much of the natural increase (births - deaths = natural population increase) of rural counties was swept away in out-migration. Urban counties gained 46,145 persons in population while net growth amounted to only 34,925 individuals, the difference representing migration from rural counties to urban North Dakota counties, net migration from rural counties to selected rural counties within North Dakota, and a migration to other states.

Since the 1980 Census, the documented loss of agricultural and nonagricultural jobs in rural counties has provided a sufficient basis for suggesting that there has been a continued migration of people from rural counties to urban population centers. Further evidence of rural to urban migration is found in the enrollment records of the Department of Public Instruction.

Department of Public Instruction enrollment records are found in Tables 3 and 4. The records illustrate the effects of the decline in enrollment, in the absence of the boom generation, and also illustrate that the rural counties of North Dakota are undergoing the greatest population loss. On the other hand, five of nine urban counties gained in enrollment for 7th to 12th graders from the 1982-1983 to the 1983-1984 School Year. For example, even though there is a statewide decline of 1.3 percent for this age group, the counties in the Bismarck MSA (Burleigh and Morton) each demonstrated increases for the 7th to 12th grade group of 1 percent or more.

With few exceptions, rural counties lost population among junior and senior students. Rural counties outside the Synthetic Natural Gas construction area collectively showed a decline of 3.6 percent. The suggestion is that this decline is greater in rural than it is in urban counties because rural families are moving from rural to urban counties. The movement of families from rural counties to urban counties is a continuation of the trend in migration found in the 1980 Census.

Unless rural counties were directly involved in West River energy development during the latter part of the 1970s, they were likely to lose more people than they gained according to the 1980 Census. To some extent, population growth in urban counties in the

West River district probably would have been much more difficult to sustain without energy development. Indeed, if the experience of the urban counties immediately to the east, on the Central Drift Prairie, is any indication of what would have happened to the population of western North Dakota without development, the urban counties of the west may not have been much larger in 1980 than they were in 1970.

Between 1970 and 1980, the population of North Dakota grew by 34,925 persons. North Dakota's population could have reached 657,000 by the time of the decennial Census. But net out-migration amounted to 4,336 persons (the state had 82,363 in-migrants and 86,699 out-migrants between 1975 and 1980) and the state's population was counted as 652,717 in the spring of 1980. (Data--Gross Migration Rates, 1975-1980:1984)

In terms of net migration from 1975 to 1980, 35 of 44 rural counties lost 21,137 persons. Three other rural counties, outside energy development areas, had more in-migrants than out-migrants for a net gain of 1,514 persons.

Although the state lost more people than it gained (-4,336), 12 other counties experienced (in addition to the three mentioned above), a net in-migration of 19,952 persons and most of those counties were in western North Dakota. Some of the people leaving rural counties in the Red River Valley and the Central Drift Prairie counties moved to six rural energy development counties in western North Dakota but others settled in West River urban counties. Six West River rural counties experienced a net in-migration of 3,989 persons, accounting for 20 percent of the (intrastate and interstate) in-migration. But migrants were more likely to find themselves living in urban energy development counties with 8,581 persons, or 43 percent of the in-migration, going to four urban counties in the West River district.

The remaining 37 percent of the net in-migration growth took place in the two urban counties of the Red River Valley. Although the results of net migration gave Stutsman County 71 persons from 1975 to 1980, the remaining two urban counties on the Drift Prairie immediately to the east of the energy development counties lost a total of 4,736 persons.

The bulk of the net in-migration, then, fell into 12 western counties with most of the growth in four western urban counties. The two other counties gaining in net migration were located in the Red River Valley. For the remaining 35 rural counties, net migration meant population loss with the natural increase unable to prevent a total population decline in most rural counties. The area of greatest contiguous population loss, spans the Central Drift Prairie, an area approximately 170 miles wide from the Missouri River at Bismarck to the edge of the Red River Valley in Cass County, and approximately 300 hundred miles long from the South Dakota border to the province of Manitoba, Canada, in the north.

Since the 1980 Census was conducted, the available data suggests that there are several reasons for continued migration from rural to urban counties in North Dakota and for emigration from the state.

There are social and demographic reasons for out-migration. One of the compelling reasons for out-migration is demographic. With an increasing proportion of individuals in the "baby boom" generation reaching young adulthood comes the increasing likelihood of migration. Between 1975 and 1980, almost 72 percent of the individuals who either moved into or out of North Dakota, and who had reached the age of majority, were between the ages of 20 and 34. The aging process is bringing the "baby boom" generation to that period in life when the decision to migrate is being made.

In addition, there are social reasons related to the nature of North Dakota's labor market and educational system that encourages out-migration. It is apparent (see Table C) that North Dakota's labor market lacks the sophisticated profile characteristic of larger economies in more urbanized states. The educational network in North Dakota educates some people to a degree of occupational specialization that is beyond the needs of North Dakota's comparatively simple economy. An economy has to be more elaborate and sophisticated rather than simply larger in order to hold its native population.

Because all jobs are not equal, in wage benefits for example, it is difficult to view migration exclusively as a straightforward function of jobs. One well-paying job in a goods-producing industry may be

sufficient to support an average-sized household (2.9 persons in North Dakota in 1980). On the other hand, it may require two jobs worked by two members of the same family in the services-producing sector to create the same level of income. Equating job growth in the aggregate, without reference to the quality of the jobs, with population growth (e.g., an increase of one job equaling an increase of 2.6 persons in the population) is not possible.

At the same time, it is apparent that events and trends in the labor market create population pressures. Not only are there negative sanctions (i.e., job loss) encouraging out-migration in rural counties, there are economic incentives drawing people from North Dakota to other areas of the country. As is illustrated in Tables 19 through 21, average earnings per job in North Dakota consistently run several dollars per month below earnings per job in the rest of the nation. Whether for reasons of occupational staffing pattern differences between North Dakota and the nation (reflecting North Dakota's less sophisticated labor market), differences in the number of hours worked, lower rates of unionization, seasonality, or other factors, the economic incentive to work in North Dakota is not as great as it is in other parts of the nation. And other parts of the nation compete for labor from North Dakota, suggesting that perhaps the single most important response of North Dakota's economy to the upswing in the national business economy is the increased export of labor.

But the most graphic and observable labor market events affecting population have been a decline of jobs in the oil and gas exploration fields since the winter and spring of 1982-1983 and the decline in the work force associated with the various power plant projects. Employment in mining averaged 7,840 in 1979, grew rapidly to 11,860 jobs in September of 1981, and tumbled through 1982 to a low of 6,130 jobs by the spring of 1983. Perhaps 4,000 people left the state (11,860 - 7,840 = 4,020) in response to the downturn in the oil industry. The rapid increase in the number of job insurance claims filed by individuals once employed in North Dakota and drawing unemployment benefits while living outside the state grew by 2 1/2 times from the

first quarter of 1982 to the first quarter of 1983. 1/ The increase in nonresident claims activity, during the time period corresponding to the downturn in mining, is convincing evidence of out-migration since the 1980 Census.

Nonresident claims activities should continue to rise during the remainder of 1984 as individuals employed at electrical generating station construction sites and at the neigboring SNG Plant are laid off. Industry reports indicate that of the 4,030 workers in Mercer County in December of 1983, 60.2 percent had an out-of-state residence prior to the startup of construction. Many nonresident construction workers are expected to leave the state during 1984, and even though many do not have families in North Dakota, they will reduce the economic vitality of West River communities that fed, clothed, and entertained them while they were here.

Further evidence of ongoing decline is sketchy but supportive of the general thesis that out-migration is a continuing characteristic of population movement in North Dakota. Allied Van Lines (catering exclusively to the interstate movement of household goods) for example, compiles statistics that have consistently shown nearly twice as many outbound customer households than inbound customer households since 1979. Related data for neighboring states indicates that the ratio of outbound customers to inbound customers to be only 1.1 for the same period in Wyoming and Minnesota, while Montana has more shipments entering the state than leaving. Further, data from one of the state's largest universities indicates that among students responding to a questionnaire over the past two school years, more students took jobs out of state (67 percent) than received job offers in North Dakota.

1/ Estimates of the average number of unemployed job insurance claimants who once worked in North Dakota but who now reside outside the state of North Dakota.

	I	II	III	IV
1981	698	441	320	309
1982	588	603	710	873
1983	1,497	1,173	777	753
1984	1,147	966		

The economic incentive, job opportunities and wages, and the available statistical evidence tends to support the notion that there is continued out-migration from the state at a pace at least as great, if not greater, that that documented from 1975 to 1980 by the Census Bureau.

Had the individuals employed by the mining industry not left the state but remained here and searched for jobs, the unemployment rate during 1984 would be much greater. But it has typically been the case in North Dakota and the rest of the Plain States, that individuals leave the state or withdraw from the labor force rather than remain unemployed.

The trend during the first half of the decade has been for both agricultural and nonagricultural goods-producing industries to decline in employment or expand only slowly relative to services-producing industries. The numerically largest employers (in the services-producing sector), retail trade and services, are the two lowest paying industries and employ 71.9 percent of the experienced female civilian labor force (see Table C). Alternatively, 45.7 percent of the experienced male labor force is found in the four goods-producing industries with 90.3 percent of the full-time jobs worked in agriculture, mining, construction, and manufacturing filled by males. With the emphasis on greater male than female participation in the labor force and few job opportunities in traditionally male industries, we may be seeing more males accepting jobs that have been traditionally filled by women simply because these are the areas of the economy that are expanding. Equality between the sexes in the labor market may come about more because males must descend the ladder of opportunity in order to find a job than because of the opportunities that females have had to ascend it.

BIBLIOGRAPHY

"Agricultural Credit Conditions Survey," Federal Reserve Bank of Minneapolis, First Quarter 1984.

"Agricultural Outlook," Economic Research Service/United States Department of Agriculture, June 1984.

"The Beginning Farmer Loan Program; A Report to the Industrial Commission of North Dakota," Department of Banking and Financial Institutions, December 20, 1982.

Chase Econometrics, "Regional Forecasts, State & Metropolitan Areas," Fourth Quarter 1983a.

-----"Regional Forecasts, State & Metropolitan Areas," Supplementary Volume: Forecast Detail, Fourth Quarter 1983b.

-----"U.S. Macroeconomic Forecast and Analysis," February 1984.

-----"Regional Forecasts, State & Metropolitan Area," First Quarter 1984b.

Curtin, Richard T., "Optimism Rides High Plateau," Economic Outlook USA, Survey Research Center/The University of Michigan, Vol. 11, No. 1, Winter 1984.

Economic Indicators, Council of Economic Advisors, April 1984.

Farm Reporter, North Dakota Crop and Livestock Reporting Service, No. 6-84, April 9, 1984.

Final Environmental Impact Statement; Great Plains Gasification Project, U.S. Department of Energy, DOE EIS-0072F Vol. 1, August 1980.

Geographic Profile of Employment and Unemployment, 1980, U.S. Department of Labor/Bureau of Labor Statistics, Bulletin 2111, March 1982.

"Gross Migration for Counties: 1975 to 1980," 1980 Census of Population, Supplementary Report, U.S. Department of Commerce/Bureau of the Census, PC80-S1-17, March 1984.

"How Healthy and Durable is the Current Expansion?" Economic Outlook USA, Survey Research Center/The University of Michigan, Vol. 11, No. 2, Spring 1984.

Hymans, Saul H., Joan P. Crary, and E. Philip Howrey, "The U.S. Economic Outlook for 1984," Economic Outlook USA, Survey Research Center/The University of Michigan, Vol. 11, No. 1, Winter 1984.

Johnson, Jerome E., "Downward Adjustment in Farmland Values Continued in 1983," North Dakota Farm Research, Vol. 42, No. 4.

Landefeld, J. Steven and Eugene P. Seskin, "Plant and Equipment Expenditures, First and Second Quarter and Second Half of 1984," Survey of Current Business, U.S. Department of Commerce/Bureau of Economic Analysis, Vol. 64, No. 3, March 1984.

McCracken, Paul W., "The Return of Sustained Expansion?", Economic Outlook USA, Survey Research Center/The University of Michigan, Vol. 11, No. 1, Winter 1984.

NDGS Newsletter, North Dakota Geological Survey, December 1983.

"1984 U.S. Industrial Outlook: Prospects for Over 300 Industries," U.S. Department of Commerce/Bureau of Industrial Economics, January 1984.

1978 Census of Agriculture, U.S. Department of Commerce, Bureau of the Census, Vol. 5, Special Reports, Part 6, 1979 Farm Finance Survey, AC78-SR-6, July 1982.

"North Dakota Agricultural Statistics 1984," North Dakota Crop and Livestock Reporting Service.

Norwood, Janet L., "Jobs and Prices in a Recovering Economy," U.S. Department of Labor/Bureau of Labor Statistics, Report 704, April 1984.

Personick, Valerie A., "The Job Outlook Through 1995: Industry Output and Employment," U.S. Department of Labor/Bureau of Labor Statistics, Monthly Labor Review, Vol. 106, No. 11, pp. 24-35, November 1983.

"Rural Development News," North Central Regional Center for Rural Development, Iowa State University, Vol. 8, No. 6, May 1984.

"The State of Small Business: A Report of the President," March 1984.

"U.S. Trade Policies," Rural Development News, North Central Regional Center for Rural Development, Iowa State University, Vol. 8, No. 6, May 1984.

Wheat Market Review, North Dakota State Wheat Commission, No. 172, April 11, 1984.

Wisner, Robert N. and Craig A. Chase, "World Food Trade and U.S. Agriculture, 1960-1982," The World Food Institute, Iowa State University, August 1983.

Zarnowitz, Victor, "Economic Outlook Survey; First Quarter 1984," NBER Reporter. National Bureau of Economic Research, Inc., Spring 1984.

APPENDIX I

POPULATION

Table 1
Population Projections to 1983 and 1985
by Age for North Dakota

Age	1980		1983		1985		1980-85 Change	
	N	%	N	%	N	%	N	%
0-15	167,620	25.7	169,530	25.5	170,800	25.4	3,180	1.9
16-24	120,520	18.5	108,960	16.4	101,250	15.1	-19,270	-16.0
25-44	167,800	25.7	189,070	28.5	206,260	30.3	35,460	21.1
45-64	116,310	17.8	113,400	17.1	111,450	16.6	- 4,860	- 4.2
≥-65	80,450	12.3	82,860	12.5	84,470	12.6	3,970	4.9
TOTAL	652,700	100.0	663,820	100.0	671,230	100.0	18,480	2.8

Table 2
Population By Age, Sex, and County, 1980
Both Sexes

	0-4	5-15	16-19	20-24	25-29	30-44	45-64	65>	Total Number	Total Percent
REGION I										
Williams	2,007	3,759	1,817	2,451	2,188	3,748	3,846	2,421	22,237	
Divide	243	524	222	186	199	529	886	705	3,494	
McKenzie	667	1,436	530	637	612	1,226	1,280	744	7,132	
TOTAL	2,917	5,719	2,569	3,274	2,999	5,503	6,012	3,870	32,862	
ROW PERCENT	8.9	17.4	7.8	10.0	9.1	16.7	18.3	11.8		100.0
REGION II										
Ward	5,579	10,332	4,637	7,718	5,969	10,395	8,459	5,267	58,392	
Bottineau	710	1,548	737	687	584	1,532	1,820	1,621	9,239	
Burke	247	659	229	207	208	584	951	737	3,822	
McHenry	575	1,387	569	465	515	1,200	1,699	1,448	7,858	
Mountrail	660	1,421	524	510	563	1,201	1,618	1,182	7,679	
Pierce	442	1,190	496	426	380	931	1,187	1,114	6,166	
Renville	250	698	239	208	241	608	736	628	3,608	
TOTAL	8,463	17,235	7,431	10,221	8,460	16,451	16,506	11,997	96,764	
ROW PERCENT	8.7	17.8	7.7	10.6	8.7	17.0	17.1	12.4		100.0
REGION III										
Ramsey	994	2,215	1,127	1,044	987	2,065	2,530	2,086	13,048	
Benson	784	1,702	588	554	512	1,147	1,481	1,176	7,944	
Cavalier	560	1,350	582	473	515	1,201	1,653	1,302	7,636	
Towner	285	660	279	278	248	585	915	802	4,052	
Eddy	280	544	239	230	241	494	797	729	3,554	
Rolette	1,385	2,862	1,130	965	874	1,861	1,959	1,141	12,177	
TOTAL	4,288	9,333	3,945	3,544	3,377	7,353	9,335	7,236	40,411	
ROW PERCENT	8.9	19.3	8.1	7.3	7.0	15.2	19.3	14.9		100.0
REGION IV										
Grand Forks	6,006	10,339	6,248	11,309	7,301	11,150	8,493	5,254	66,100	
Nelson	310	799	319	264	305	778	1,254	1,204	5,233	
Walsh	1,123	2,559	1,067	1,069	1,188	2,565	3,286	2,514	15,371	
Pembina	847	1,781	661	694	806	1,672	2,218	1,720	10,399	
TOTAL	8,286	15,478	8,295	13,336	9,600	16,165	15,251	10,692	97,103	
ROW PERCENT	8.5	15.9	8.5	13.7	9.9	16.7	15.7	11.0		99.9
REGION V										
Cass	6,924	13,339	7,116	12,434	9,964	16,074	13,958	8,438	88,247	
Traill	709	1,452	794	888	651	1,387	1,898	1,845	9,624	
Steele	245	501	229	183	203	509	731	505	3,106	
Ransom	507	1,130	442	394	479	1,029	1,439	1,278	6,698	
Richland	1,487	2,685	2,421	2,369	1,533	2,566	3,373	2,773	19,207	
Sargent	443	1,016	367	402	424	933	1,111	816	5,512	
TOTAL	10,315	20,123	11,369	16,670	13,254	22,498	22,510	15,655	132,394	
ROW PERCENT	7.8	15.2	8.6	12.6	100.0	17.0	17.0	11.8		100.0
REGION VI										
Stutsman	1,918	3,929	1,746	2,367	2,138	4,084	4,734	3,238	24,154	
Wells	472	1,202	486	411	421	1,039	1,535	1,413	6,979	
McIntosh	244	691	321	247	249	652	1,289	1,097	4,800	
Logan	223	616	287	203	168	503	908	585	3,493	
Foster	348	877	323	343	310	681	968	761	4,611	
Dickey	580	1,228	502	596	513	1,136	1,418	1,234	7,207	
LaMoure	495	1,136	434	419	422	941	1,456	1,170	6,473	
Barnes	1,023	2,119	1,232	1,343	1,048	2,072	2,720	2,403	13,960	
Griggs	260	576	205	222	261	554	891	745	3,714	
TOTAL	5,563	12,374	5,546	6,151	5,530	11,662	15,919	12,646	75,391	
ROW PERCENT	7.4	16.4	7.3	8.2	7.3	15.5	21.1	16.8		100.0
REGION VII										
Burleigh	4,716	9,657	4,433	6,155	5,713	10,663	8,875	4,599	54,811	
McLean	1,125	2,233	776	895	1,026	2,056	2,489	1,783	12,383	
Sheridan	190	479	188	162	156	451	736	457	2,819	
Kidder	320	712	263	241	260	593	892	552	3,833	
Emmons	387	1,224	503	301	293	870	1,387	912	5,877	
Morton	2,361	4,833	1,962	2,278	2,280	4,341	4,106	2,716	25,177	
Mercer	891	1,700	596	703	906	1,760	1,687	961	9,404	
Oliver	247	478	199	194	211	469	488	209	2,495	
Grant	326	828	302	239	294	662	960	663	4,274	
Sioux	461	950	307	310	276	585	535	196	3,620	
TOTAL	11,024	23,094	9,529	11,678	11,415	22,450	22,455	13,048	124,693	
ROW PERCENT	8.8	18.5	7.6	9.4	9.2	18.0	18.0	10.5		100.0
REGION VIII										
Stark	2,169	4,290	2,143	2,957	2,257	3,800	3,758	2,323	23,697	
Slope	95	219	91	87	86	169	279	131	1,157	
Hettinger	291	786	323	258	291	632	1,016	678	4,275	
Golden Valley	188	459	170	150	167	377	494	386	2,391	
Dunn	406	879	356	389	353	750	962	532	4,627	
Bowman	374	802	313	333	327	713	796	571	4,229	
Billings	93	225	104	85	88	195	251	97	1,138	
Adams	280	605	231	260	266	615	744	583	3,584	
TOTAL	3,896	8,265	3,731	4,519	3,835	7,251	8,300	5,301	45,098	
ROW PERCENT	8.6	18.3	8.3	10.0	8.5	16.1	18.4	11.8		100.0
STATE TOTAL	54,752	111,621	52,415	69,393	58,470	109,333	116,288	80,445	652,717	
ROW PERCENT	8.4	17.1	8.0	10.6	9.0	16.8	17.8	12.3		100.0

SOURCE: "1980 Census of Population; General Population Characteristics"
PC80-1-B36 (Vol. 1, Chapt. B), August 1982.

Table 2 (continued)
Male

	0-4	5-15	16-19	20-24	25-29	30-44	45-64	65>	Total Number	Total Percent
REGION I										
Williams	1,070	1,882	903	1,299	1,234	1,956	1,887	1,079	11,310	
Divide	118	277	125	104	102	273	453	345	1,797	
McKenzie	340	736	298	348	332	653	651	376	3,734	
TOTAL	1,528	2,895	1,326	1,751	1,668	2,882	2,991	1,800	16,841	
ROW PERCENT	9.1	17.2	7.9	10.4	9.9	17.1	17.7	10.7		100.0
REGION II										
Ward	2,842	5,313	2,349	4,057	3,154	5,365	4,125	2,226	29,431	
Bottineau	372	775	360	362	313	779	886	780	4,627	
Burke	152	320	121	113	113	295	467	364	1,925	
McHenry	322	740	317	263	275	607	845	710	4,079	
Mountrail	342	721	271	269	287	615	813	569	3,887	
Pierce	248	636	267	208	190	467	587	492	3,095	
Renville	135	370	130	110	140	311	365	295	1,856	
TOTAL	4,393	8,875	3,815	5,382	4,472	8,439	8,088	5,436	48,900	
ROW PERCENT	9.0	18.1	7.8	11.0	9.1	17.3	16.5	11.1		99.9
REGION III										
Ramsey	516	1,110	589	490	490	1,052	1,271	898	6,416	
Benson	403	866	308	302	256	597	749	580	4,061	
Cavalier	292	706	304	279	260	623	837	621	3,922	
Towner	135	324	160	150	140	305	454	358	2,026	
Eddy	146	282	136	128	126	252	384	348	1,802	
Rolette	676	1,455	587	441	412	938	973	539	6,021	
TOTAL	2,168	4,743	2,084	1,790	1,684	3,767	4,668	3,344	24,248	
ROW PERCENT	8.9	19.6	8.6	7.4	6.9	15.5	19.3	13.8		100.0
REGION IV										
Grand Forks	3,094	5,279	3,260	6,117	5,890	5,801	4,213	2,080	35,734	
Nelson	164	402	183	147	172	401	638	563	2,670	
Walsh	589	1,314	565	563	626	1,304	1,594	1,137	7,692	
Pembina	428	901	329	378	443	856	1,108	776	5,219	
TOTAL	4,275	7,896	4,337	7,205	9,131	8,562	7,553	4,556	49,315	
ROW PERCENT	8.7	16.0	8.8	14.6	10.4	17.0	15.3	9.2		100.0
REGION V										
Cass	5,553	6,914	3,607	6,106	4,997	8,555	6,866	3,336	43,714	
Traill	322	756	381	451	352	717	926	806	4,711	
Steele	110	257	126	104	116	255	376	247	1,591	
Ransom	272	564	240	202	254	538	736	603	3,409	
Richland	761	1,554	1,403	1,390	863	1,311	1,668	1,197	9,947	
Sargent	258	521	204	229	240	495	565	392	2,882	
TOTAL	5,236	10,566	5,961	8,482	6,822	11,669	11,137	6,581	66,254	
ROW PERCENT	7.9	15.6	9.0	12.8	10.3	17.6	16.8	9.9		99.9
REGION VI										
Stutsman	1,000	2,025	899	1,190	1,102	2,049	2,316	1,365	11,946	
Wells	238	624	265	218	230	512	741	669	3,497	
McIntosh	111	369	176	129	137	313	657	479	2,371	
Logan	107	328	161	120	85	244	467	279	1,791	
Foster	160	479	154	170	159	339	471	352	2,284	
Dickey	303	658	248	309	282	569	706	538	3,613	
LaMoure	246	569	231	235	239	485	728	530	3,263	
Barnes	534	1,061	586	709	556	1,063	1,340	1,041	6,890	
Griggs	135	300	127	113	158	287	445	363	1,928	
TOTAL	2,834	6,413	2,847	3,193	2,948	5,861	7,871	5,616	37,583	
ROW PERCENT	7.5	17.1	7.6	8.5	7.8	15.6	20.9	14.9		99.9
REGION VII										
Burleigh	2,475	4,879	2,155	2,796	2,876	5,405	4,305	1,859	26,750	
McLean	585	1,159	419	470	522	1,104	1,256	861	6,376	
Sheridan	104	253	101	83	80	231	375	227	1,454	
Kidder	166	376	138	139	134	307	444	255	1,959	
Emmons	208	611	263	161	162	428	705	440	2,978	
Morton	1,204	2,542	995	1,165	1,207	2,214	2,241	1,128	12,696	
Mercer	474	861	318	490	497	956	872	431	4,899	
Oliver	129	273	95	107	108	247	256	107	1,322	
Grant	165	463	172	133	153	338	480	320	2,224	
Sioux	256	491	156	157	148	285	264	89	1,846	
TOTAL	5,766	11,908	4,812	5,701	5,887	11,515	11,198	5,717	62,504	
ROW PERCENT	9.2	19.1	7.7	9.1	9.4	18.4	17.9	9.1		99.9
REGION VIII										
Stark	1,092	2,159	1,076	1,537	1,223	1,969	1,808	1,014	11,878	
Slope	52	108	53	55	45	90	148	63	612	
Hettinger	149	389	168	135	167	326	500	319	2,153	
Golden Valley	98	250	94	78	98	193	235	164	1,210	
Dunn	217	427	187	224	196	397	491	281	2,420	
Bowman	199	411	161	169	168	358	396	260	2,122	
Billings	48	102	53	54	48	99	137	55	596	
Adams	155	298	113	135	134	321	357	277	1,790	
TOTAL	2,010	4,144	1,905	3,385	2,079	3,753	4,072	2,433	22,781	
ROW PERCENT	8.8	18.2	8.3	10.5	9.1	16.5	17.9	10.7		100.0
STATE TOTAL	28,210	57,240	27,087	35,884	30,691	56,248	57,578	35,483	328,426	
ROW PERCENT	8.6	17.4	8.3	10.9	9.4	17.1	17.5	10.8		100.0

SOURCE: "1980 Census of Population; General Population Characteristics"
PC80-1-B36 (Vol. 1, Chapt. B), August 1982.

Table 2 (continued)
Female

	0-4	5-15	16-19	20-24	25-29	30-44	45-64	65>	Total Number	Total Percent
REGION I										
Williams	937	1,877	914	1,152	954	1,792	1,959	1,342	10,927	
Divide	125	247	97	82	97	256	433	360	1,697	
McKenzie	327	700	232	289	280	573	629	368	3,398	
TOTAL	1,389	2,824	1,243	1,523	1,331	2,621	3,021	2,070	16,022	
ROW PERCENT	8.7	17.6	7.8	9.5	8.3	16.4	18.8	12.9		100.0
REGION II										
Ward	2,737	5,019	2,289	3,661	2,815	5,030	4,370	3,041	28,961	
Bottineau	338	773	377	325	271	753	934	841	4,612	
Burke	115	339	108	94	95	289	484	373	1,897	
McHenry	253	647	252	202	240	593	854	738	3,779	
Mountrail	318	700	253	241	276	586	805	613	3,792	
Pierce	194	554	229	218	190	464	600	622	3,071	
Renville	115	328	109	98	101	297	371	333	1,752	
TOTAL	4,070	8,360	3,616	4,839	3,988	8,012	8,418	6,561	47,864	
ROW PERCENT	8.5	17.5	7.6	10.1	8.3	16.7	17.6	13.7		100.0
REGION III										
Ramsey	478	1,105	538	554	497	1,013	1,259	1,188	6,632	
Benson	381	836	280	252	256	550	732	596	3,883	
Cavalier	268	644	278	194	255	578	816	681	3,714	
Towner	150	336	119	128	108	280	461	444	2,026	
Eddy	134	262	103	102	115	242	413	381	1,752	
Rolette	709	1,407	543	524	462	923	986	602	6,156	
TOTAL	2,120	4,590	1,861	1,754	1,693	3,586	4,667	3,892	24,163	
ROW PERCENT	8.8	19.0	7.7	7.3	7.0	14.8	19.3	16.1		100.0
REGION IV										
Grand Forks	2,912	5,060	2,988	5,192	5,411	5,549	4,280	3,174	32,566	
Nelson	146	397	136	117	133	377	616	641	2,565	
Walsh	534	1,245	502	506	562	1,261	1,692	1,377	7,679	
Pembina	419	880	332	516	363	816	1,110	944	5,180	
TOTAL	4,011	7,582	3,958	6,131	4,469	7,803	7,698	6,136	47,788	
ROW PERCENT	8.4	15.9	8.3	12.8	9.4	16.3	16.1	12.8		100.0
REGION V										
Cass	5,391	6,425	5,509	6,328	4,967	7,719	7,092	5,102	44,533	
Traill	387	696	413	437	299	670	972	1,039	4,913	
Steele	135	244	103	79	87	254	355	258	1,515	
Ransom	235	566	202	192	225	491	705	675	3,289	
Richland	726	1,331	1,018	979	670	1,255	1,705	1,576	9,260	
Sargent	205	495	163	173	184	440	546	424	2,630	
TOTAL	5,079	9,757	5,408	8,188	6,432	10,829	11,375	9,074	66,140	
ROW PERCENT	7.7	14.7	8.2	12.4	9.7	16.4	17.2	13.7		100.0
REGION VI										
Stutsman	918	1,904	847	1,177	1,036	2,035	2,418	1,875	12,208	
Wells	234	578	221	193	191	527	794	744	3,482	
McIntosh	133	322	155	118	112	339	632	618	2,429	
Logan	116	288	126	85	85	259	441	506	1,702	
Foster	188	398	169	173	151	542	497	409	2,527	
Dickey	277	570	254	287	231	567	712	696	3,594	
LaMoure	249	567	205	184	185	456	728	640	3,210	
Barnes	489	1,058	646	634	492	1,009	1,380	1,362	7,070	
Griggs	125	276	78	109	103	267	446	382	1,786	
TOTAL	2,729	5,961	2,699	2,958	2,582	5,801	8,048	7,030	37,808	
ROW PERCENT	7.2	15.8	7.1	7.8	6.8	15.3	21.3	18.6		99.9
REGION VII										
Burleigh	2,241	4,778	2,278	3,359	2,857	5,258	4,570	2,740	28,061	
McLean	540	1,074	357	425	504	952	1,235	922	6,007	
Sheridan	86	226	87	79	76	220	361	230	1,365	
Kidder	154	336	125	102	126	286	448	297	1,874	
Emmons	179	613	240	140	131	442	682	472	2,899	
Morton	1,157	2,291	967	1,113	1,073	2,127	2,165	1,588	12,481	
Mercer	417	859	278	413	409	804	815	550	4,505	
Oliver	118	205	104	87	103	222	232	102	1,173	
Grant	161	365	130	106	141	324	480	343	2,050	
Sioux	205	459	151	153	128	300	271	107	1,774	
TOTAL	5,258	11,186	4,717	5,977	5,528	10,935	11,257	7,331	62,189	
ROW PERCENT	8.4	18.0	7.6	9.6	8.9	17.6	18.1	11.8		100.0
REGION VIII										
Stark	1,077	2,131	1,067	1,420	1,034	1,831	1,950	1,309	11,819	
Slope	43	111	58	34	41	79	131	68	545	
Hettinger	142	397	155	123	124	306	516	359	2,122	
Golden Valley	90	209	76	72	69	184	259	222	1,181	
Dunn	189	452	169	165	157	353	471	251	2,207	
Bowman	175	391	152	164	159	355	400	311	2,107	
Billings	45	123	51	51	40	96	114	42	542	
Adams	125	307	118	125	132	294	387	306	1,794	
TOTAL	1,886	4,121	1,826	2,134	1,756	3,498	4,228	2,868	22,317	
ROW PERCENT	8.4	18.5	8.2	9.6	7.9	15.7	18.9	12.8		100.0
STATE TOTAL	26,542	54,181	25,328	33,504	27,779	53,085	58,710	44,962	324,291	
ROW PERCENT	8.2	16.8	7.8	10.3	8.6	16.4	18.1	13.8		100.0

SOURCE: "1980 Census of Population; General Population Characteristics"
PC80-1-B36 (Vol. 1, Chapt. B), August 1982.

Table 3
Enrollment in Grades 7-12 for the 1982-83 and 1983-84 School Years by County

	1982-83 School Year							1983-84 School Year							
	7th	8th	9th	10th	11th	12th	Total N	7th	8th	9th	10th	11th	12th	Total N	Percent Change
REGION I															
Williams	435	397	379	387	338	346	2,282	425	399	365	372	353	319	2,233	-2.1
Divide	50	39	37	43	42	51	262	44	48	40	37	46	43	258	-1.5
McKenzie	140	136	110	111	81	80	658	110	126	103	104	107	90	640	-2.7
TOTAL	625	572	526	541	461	477	3,202	579	573	508	513	506	452	3,131	-2.2
REGION II															
Ward	959	880	740	804	884	793	5,060	937	905	859	727	791	826	5,045	-0.3
Bottineau	152	132	170	149	145	151	899	140	145	138	152	142	144	861	-4.2
Burke	64	74	61	50	68	76	393	60	63	70	58	43	68	362	-7.9
McHenry	130	131	126	153	137	158	835	115	124	132	128	151	135	785	-6.0
Mountrail	140	128	118	131	113	115	745	151	135	127	115	125	107	760	2.0
Pierce	108	87	101	103	107	110	616	95	112	86	95	97	109	594	-3.6
Renville	63	59	64	65	65	77	393	74	65	62	61	59	61	382	-2.8
TOTAL	1,616	1,491	1,380	1,455	1,519	1,480	8,941	1,572	1,549	1,474	1,336	1,408	1,450	8,789	-1.7
REGION III															
Ramsey	219	195	200	218	243	234	1,309	224	212	200	195	195	225	1,251	-4.4
Benson	134	132	131	149	148	118	812	124	135	117	117	131	135	759	-6.5
Cavalier	103	84	100	112	122	146	667	102	101	82	97	108	116	606	-9.1
Towner	66	48	60	68	60	65	367	59	72	50	60	66	58	365	-0.5
Eddy	42	52	53	57	49	54	307	45	41	51	51	50	45	283	-7.8
Rolette	254	218	239	240	230	246	1,427	262	252	217	224	218	203	1,376	-3.6
TOTAL	818	729	783	844	852	863	4,889	816	813	717	744	768	782	4,640	-5.1
REGION IV															
Grand Forks	928	814	736	722	758	741	4,699	887	926	787	722	676	716	4,714	0.3
Nelson	101	90	89	87	119	101	587	78	98	91	87	89	115	558	-4.9
Walsh	222	200	188	209	212	262	1,293	234	224	194	179	189	248	1,268	-1.9
Pembina	166	143	178	160	168	185	1,000	160	159	144	160	156	162	941	-5.9
TOTAL	1,417	1,247	1,191	1,178	1,257	1,289	7,579	1,359	1,407	1,216	1,148	1,110	1,241	7,481	-1.3
REGION V															
Cass	1,248	1,174	1,203	1,246	1,253	1,309	7,433	1,267	1,240	1,235	1,225	1,215	1,258	7,440	0.1
Traill	153	154	139	125	122	162	855	133	145	150	138	121	114	801	-6.3
Steele	35	42	32	37	24	41	211	31	35	39	32	36	23	196	-7.1
Ransom	125	70	107	89	115	115	621	92	121	68	108	87	112	588	-5.3
Richland	290	298	199	234	223	239	1,483	314	314	216	198	235	223	1,500	1.1
Sargent	91	78	78	71	86	72	476	86	84	77	79	69	84	479	0.6
TOTAL	1,942	1,816	1,758	1,802	1,823	1,938	11,079	1,923	1,939	1,785	1,780	1,763	1,814	11,004	-0.7
REGION VI															
Stutsman	337	380	293	333	331	330	2,004	331	340	387	306	322	332	2,018	0.7
Wells	115	105	105	116	125	126	692	104	115	111	101	115	120	666	-3.8
McIntosh	79	51	73	87	80	90	460	54	81	53	74	92	77	431	-6.3
Logan	54	48	55	52	57	62	328	53	53	47	50	50	58	311	-5.2
Foster	85	75	83	74	91	105	513	100	83	77	82	76	91	509	-0.8
Dickey	109	90	101	103	97	99	599	108	112	87	99	98	96	600	0.2
LaMoure	124	83	91	98	113	121	630	104	118	74	83	96	113	593	-5.9
Barnes	184	182	194	170	199	206	1,135	185	183	177	192	169	194	1,100	-3.1
Griggs	50	50	38	42	42	51	273	54	51	50	39	45	42	281	2.9
TOTAL	1,137	1,064	1,033	1,075	1,135	1,190	6,634	1,093	1,136	1,063	1,031	1,063	1,123	6,509	-1.9
REGION VII															
Burleigh	880	830	771	892	842	841	5,056	912	884	848	815	838	817	5,114	1.1
McLean	243	225	215	223	230	235	1,371	244	244	242	216	231	232	1,409	2.8
Sheridan	39	28	22	36	30	33	188	23	39	29	21	33	29	174	-7.4
Kidder	75	54	53	51	69	49	351	41	68	49	48	48	59	313	-10.8
Emmons	114	100	95	115	120	119	663	105	113	95	95	109	121	638	-3.8
Morton	474	448	462	456	451	423	2,714	471	463	464	445	454	453	2,750	1.3
Mercer	163	154	168	146	150	148	929	210	184	178	178	174	157	1,081	16.4
Oliver	25	35	38	22	27	41	188	39	40	33	38	21	29	200	6.4
Grant	58	65	62	79	78	73	415	60	57	74	68	73	75	407	-1.9
Sioux	69	68	105	73	89	58	462	60	66	79	75	72	79	431	-6.7
TOTAL	2,140	2,007	1,991	2,093	2,086	2,020	12,337	2,165	2,158	2,091	1,999	2,053	2,051	12,517	1.5
REGION VIII															
Stark	427	443	393	415	437	424	2,539	392	414	431	370	405	413	2,425	-4.5
Slope	11	3	0	0	0	0	14	12	11	0	0	0	0	23	64.3
Hettinger	89	96	97	121	132	121	656	75	90	107	91	119	121	603	-8.1
Golden Valley	39	45	53	53	55	46	291	40	45	53	52	45	55	290	-0.3
Dunn	70	65	74	57	64	59	389	61	76	69	70	56	63	395	1.5
Bowman	63	77	83	78	79	92	472	100	67	74	82	77	81	481	1.9
Billings	19	13	0	0	0	0	32	6	19	0	0	0	0	25	-21.9
Adams	47	54	50	54	61	61	327	51	47	56	49	51	62	316	-3.4
TOTAL	765	796	750	778	828	803	4,720	737	769	790	714	753	795	4,558	-3.4
STATE TOTAL	10,460	9,722	9,412	9,766	9,961	10,060	59,381	10,244	10,334	9,644	9,265	9,424	9,708	58,619	-1.3

SOURCE: Department of Public Instruction, "Enrollment and Teachers Report," PI3-030-AA 11/19/82 and 11/3/83.

Table 4
Percent Change in the Number of Junior and Senior High School Students
for Urban and Rural Portions of North Dakota: 1982-83, 1983-84 School Years

	PERCENT CHANGE						
	7th	8th	9th	10th	11th	12th	Total
Urban Counties*	-1.0	4.0	7.7	-5.4	-5.2	-1.5	-0.3
Rural Counties	-3.4	9.4	-3.9	-4.8	-5.6	-5.8	-2.5
SNG Plant Const. Counties**	14.4	13.0	7.6	9.2	4.7	-1.4	7.9
Other Rural Counties	-5.3	9.0	-5.2	-6.2	-6.7	-6.3	-3.6
State Total	-2.1	6.3	2.5	-5.1	-5.4	-3.5	-1.3

	1983-84 SCHOOL YEAR						
	7th	8th	9th	10th	11th	12th	Total
Urban Counties	5,846	5,783	5,576	5,117	5,249	5,359	32,990
Rural Counties	4,398	4,551	4,068	4,088	4,175	4,349	25,629
SNG Plant Const. Counties	493	468	453	427	426	418	2,685
Other Rural Counties	3,905	4,083	3,615	3,661	3,749	3,931	22,944
State Total	10,244	10,334	9,644	9,265	9,424	9,708	58,619

	1982-83 SCHOOL YEAR						
	7th	8th	9th	10th	11th	12th	Total
Urban Counties	5,907	5,561	5,177	5,473	5,537	5,441	33,096
Rural Counties	4,553	4,161	4,235	4,293	4,424	4,619	26,285
SNG Plant Const. Counties	431	414	421	391	407	424	2,488
Other Rural Counties	4,122	3,747	3,814	3,902	4,017	4,195	23,797
State Total	10,460	9,722	9,412	9,766	9,961	10,060	59,381

* For purposes of this analysis, urban counties include: Williams, Ward, Ramsey, Grand Forks, Cass, Stutsman, Burleigh, Morton, and Stark.

** Synthetic Natural Gas construction counties are: McLean, Mercer, and Oliver.

APPENDIX II

LABOR FORCE AND OCCUPATION

Table 5
North Dakota Civilian Population and Labor Force Estimates by Sex and Age, 1983*

	Civilian Population						
	Civilian Labor Force						
	Unemployment		Employment	Labor Force			
	N	Row % Rate	N	N	Participation Rate (Row %)	Not In Labor Force	Population
Male							
16-24	3,620	8.8	37,290	40,910	76.2	12,800	53,710
25-44	4,490	5.1	83,130	87,620	96.9	2,820	90,440
45-64	1,580	3.3	46,740	48,320	85.7	8,040	56,360
>65	500	4.9	9,650	10,150	26.1	28,840	38,990
TOTAL	10,190	5.4	176,810	187,000	78.1	52,500	239,500
Female							
16-24	2,910	9.2	31,670	34,580	67.1	16,980	51,560
25-44	3,300	5.4	57,720	61,020	68.2	28,410	89,430
45-64	1,320	4.4	29,000	30,320	51.6	28,420	58,740
>65	280	6.9	3,800	4,080	9.1	40,790	44,870
TOTAL	7,810	6.0	122,190	130,000	53.1	114,600	244,600
Total							
16-24	6,530	8.7	68,960	75,490	71.7	29,780	105,270
25-44	7,790	5.2	140,850	148,640	82.6	31,230	179,870
45-64	2,900	3.7	75,740	78,640	68.3	36,460	115,100
>65	780	5.5	13,450	14,230	16.7	69,630	83,860
TOTAL	18,000	5.7	299,000	317,000	65.5	167,100	484,100

* Cell distributions have been estimated from weighted averages computed from 1983, 1982, and 1981 Current Population Survey data for North Dakota. (Benchmark-March, 1983).

Table 6
North Dakota Civilian Population and Labor Force Estimates by Sex and Age, 1982

	Civilian Population						
	Civilian Labor Force						
	Unemployment		Employment	Labor Force			
	N	Row % Rate	N	N	Participation Rate (Row %)	Not In Labor Force	Population
Male							
16-24	4,990	11.9	36,840	41,830	76.7	12,680	54,510
25-44	3,510	4.2	80,160	83,670	96.4	3,130	86,800
45-64	1,870	3.6	49,800	51,670	88.1	6,950	58,620
>65	510	5.0	9,710	10,220	27.6	26,850	37,070
TOTAL	10,880	5.8	176,510	187,390	79.1	49,610	237,000
Female							
16-24	3,520	9.6	33,110	36,630	66.5	18,480	55,110
25-44	2,610	4.6	53,800	56,410	66.1	28,980	85,390
45-64	720	2.3	30,970	31,690	51.7	29,590	61,280
>65	270	7.0	3,610	3,880	9.2	38,340	42,220
TOTAL	7,120	5.5	121,490	128,610	52.7	115,390	244,000
Total							
16-24	8,510	10.8	69,950	78,460	71.6	31,160	109,620
25-44	6,120	4.4	133,960	140,080	81.4	32,110	172,190
45-64	2,590	3.1	80,770	83,360	69.5	36,540	119,900
>65	780	5.5	13,320	14,100	17.8	65,190	79,290
TOTAL	18,000	5.7	298,000	316,000	65.7	165,000	481,000

* Cell distributions have been estimated from weighted averages computed from 1982, 1981, and 1980 Current Population Survey data for North Dakota. (Benchmark March, 1983.)

Summary Data From the 1982 Census of Agriculture

Farm Characteristics	1978	1982	Change N	Change %
TOTAL	40,357	36,436	-3,921	-9.7
BY SIZE (acres):				
1-9	1,048	1,121	73	7.0
10-49	902	1,142	240	26.6
50-179	3,564	3,179	-385	-10.8
180-499	7,901	6,577	-1,324	-16.8
500-999	11,774	9,756	-2,018	-17.1
1,000-1,999	11,133	10,045	-1,088	-9.8
2,000≥	4,035	4,616	581	14.4

Farm Operator Characteristics	1978	1982	Change N	Change %
TOTAL	40,357	36,436	-3,921	-9.7
BY AGE:				
< 24	2,111	1,974	-137	-6.5
25-34	6,627	6,845	218	3.3
35-44	7,056	6,776	-280	-4.0
45-54	9,900	7,859	-2,041	-20.6
55-64	10,107	8,594	-1,513	-15.0
65≥	4,556	4,388	-168	-3.7
BY PRINCIPAL OCCUPATION AND RESIDENCE:				
Occupation: Farming	34,086	30,594	-3,492	-10.2
Residence on Farm Operated	25,210	22,691	-2,519	-10.0
Residence Not on Farm Operated	5,289	4,640	-649	-12.3
Occupation: Nonfarming	6,271	5,842	-429	-6.8
Residence on Farm Operated	2,857	2,603	-254	-8.9
Residence Not on Farm Operated	2,605	2,533	-72	-2.8
BY DAYS OF OFF FARM WORK:				
None	25,287	23,375	-1,912	-7.6
1-99	7,157	5,771	-1,386	-19.4
100≥	7,913	7,290	-623	-7.9

Selected Production Expenditures (Thousands of Dollars)

	1978	1982	Change in Expenditures $	As a Proportion of Decrease	As a Proportion of Increase
TOTAL	724,115	950,912	226,797	$-5,090	$226,797
Livestock and poultry purchased	107,496	104,075	-3,421	67.2	
Feed for livestock and poultry	61,321	72,998	11,677		5.1
Seeds, bulbs, plants, and trees	53,614	92,215	38,601		17.0
Commercial fertilizer	150,712	159,071	8,359		3.7
Other agricultural chemicals	70,412	116,882	46,470		20.5
Hired farm labor	70,743	77,019	6,276		2.8
Contract labor	5,630	3,961	-1,669	32.8	
Customwork, machinery hire & rent of equipment	39,482	43,917	4,435		2.0
Gasoline and gasohol	66,605	100,723	34,118		15.0
Diesel fuel	55,915	120,501	64,586		28.5
Electricity	18,870	30,855	11,985		5.3
				100.0	99.9

SOURCE: Bureau of the Census, "1982 Census of Agriculture; North Dakota" (Preliminary Report) AC82-A-000(p), March 1984.

Table 3

Occupations of Employed Persons by Age and Sex for North Dakota

(Census Week, April 1, 1980)

SEX: Both Sexes

Occupation	Age 16-19 N	16-19 %	20-29 N	20-29 %	30-44 N	30-44 %	45-59 N	45-59 %	>60 N	>60 %	Total N	Total %
MANAGERIAL & PROFESSIONAL SPECIALTY	873	3.7	16,681	19.1	21,103	26.8	12,792	21.6	3,859	16.1	55,308	20.3
Executive, Administrative, & Managerial	532		6,001		8,946		6,758		1,830		23,867	
Administrative, Education, & Related	8		86		494		297		63		948	
Managers, Medicine, & Health	0		61		153		90		49		353	
Managers & Administrators N.E.C. Salaried	223		2,684		3,860		3,007		665		10,439	
Managers & Administrators N.E.C. Self-Employed	11		312		718		696		229		1,966	
Management-Related Occupations	61		1,824		1,958		1,274		383		5,510	
Professional Specialty Occupations	341		10,680		12,157		6,034		2,029		31,441	
Engineers, Architects, and Surveyors	12		664		888		356		104		2,024	
Architects	0		54		122		42		6		224	
Engineers	6		521		713		298		95		1,633	
Mathematical & Computer Scientists	0		113		93		28		0		234	
Health Diagnosing Occupations	7		184		647		429		175		1,442	
Physicians	0		109		454		284		112		959	
Health Assessment & Treating	70		2,572		1,592		843		253		5,330	
Registered Nurses	14		1,899		1,108		628		172		3,821	
Teachers, Secondary	23		1,057		1,236		404		183		2,903	
TECHNICAL, SALES, & ADMINISTRATIVE SUPPORT	6,253	26.7	25,947	29.7	20,589	26.1	13,717	23.2	4,360	18.2	70,866	26.0
Technicians & Related Occupations	180		5,699		2,159		846		243		7,172	
Licensed Practical Nurses	41		970		441		125		75		1,652	
Computer Programmers	5		256		129		22		0		412	
Sales Occupations	3,525		8,156		7,512		5,582		2,160		26,935	
Supervisors & Proprietors	161		1,137		1,486		1,407		512		4,703	
Self-Employed	3		119		495		573		247		1,435	
Sales Representatives Finance & Business Service	100		1,024		1,647		930		391		4,092	
Sales, Retail, & Personal Service	3,199		5,196		5,320		2,987		1,055		15,357	
Administrative Support Occupations	2,548		14,092		10,918		7,289		1,957		36,804	
Supervisors, Administrative Support	34		367		630		455		83		1,569	
Secretaries, Stenographers, & Typists	852		5,172		3,086		1,660		424		11,194	
Secretaries	590		4,573		2,767		1,430		378		9,838	
Financial Records Processing	296		12,114		2,475		1,646		467		7,160	
Bookkeeper, Accounting & Auditing Clerks	255		2,078		2,342		1,532		440		6,647	
Bank Teller	150		717		282		167		31		1,347	
Other Administrative Support Occupations	690		3,091		2,726		1,760		539		8,806	
SERVICE OCCUPATIONS	7,738	33.0	11,596	13.3	8,556	10.9	8,249	14.0	5,116	21.3	41,255	15.1
Private Household Occupations	214		428		339		262		315		1,558	
Protective Service Occupations	84		796		767		413		192		2,252	
Police & Detective, Public Service	15		350		316		117		19		817	
Other Service Occupations	7,440		10,372		7,450		7,574		4,609		37,445	
Food Preparation & Service	4,880		4,360		3,024		3,078		1,466		16,808	
Waiters & Food Counter Workers	2,299		2,113		978		582		182		6,154	
Cooks	1,406		834		948		1,401		738		5,327	
Health Service Occupations	1,007		2,256		1,210		1,289		622		6,384	
Nurse Aides, Orderlies, & Attendants	748		1,584		1,006		1,049		556		4,943	
Cleaning & Building Services	1,173		1,650		1,672		2,398		1,869		8,762	
Personal Service Occupations	580		2,106		1,544		809		652		5,491	
FARMING, FORESTRY, AND FISHING	2,731	11.7	8,266	9.5	10,279	13.0	12,419	21.0	6,489	27.0	40,154	14.7
Farm Operators & Managers	368		5,434		8,836		11,185		5,623		31,446	
Farm Occupations, Executive Managers	2,202		2,577		1,240		1,069		703		7,791	
Related Agricultural Occupations	135		229		174		156		158		852	
Forestry & Fishing Occupations	26		26		29		9		5		95	
PRECISION PRODUCTION CRAFT & REPAIR	1,856	7.9	12,299	14.1	9,995	12.7	6,060	10.3	2,174	9.1	32,384	11.9
Mechanics & Repairers	778		4,309		3,541		2,042		705		11,375	
Auto Mechanics, Including Body	453		1,740		1,299		646		278		4,396	
Heating, Air Conditioning, & Refrigeration Mechanics	10		51		99		45		25		230	
Construction Trades	535		4,209		3,893		2,486		835		12,534	
Carpenters	188		1,628		1,085		703		378		5,982	
Electricians	62		822		520		252		84		1,740	
Extractive Occupations	231		1,084		595		187		29		2,126	
Precision Production Occupations	312		2,121		1,966		1,345		607		6,351	
Precision Metal working Occupations	60		485		408		161		58		1,172	
Machinists	41		257		160		62		26		546	
OPERATORS, FABRICATORS, & LABORERS	3,973	17.0	12,559	14.3	8,272	10.5	5,847	9.9	1,992	8.3	32,623	12.0
Machine Operators, Assemblers & Inspectors	689		3,818		2,245		1,543		695		8,990	
Machine Operators, Assemblers & Tenders	388		1,959		1,308		932		435		5,022	
Printing Machine Operators	26		218		145		130		19		538	
Transportation & Material Moving	671		4,738		4,159		2,989		775		13,332	
Motor Vehicle Operators	464		3,208		2,849		1,899		538		8,952	
Truck Drivers & Driver-Sales Occupations	404		2,887		2,553		1,525		339		7,708	
Handlers, Equipment Cleaners & Laborers	2,613		3,983		1,888		1,315		562		10,361	
Construction Laborers	332		970		446		272		96		2,116	
Manufacturing Laborers	63		284		112		62		3		524	
TOTAL	23,424	100.0	87,328	100.0	78,794	100.0	59,084		23,990	100.0	272,620	100.0
ROW PERCENT	8.6		32.0		28.9		21.7		8.8		100.0	

SOURCE: "Detailed Population Characteristics," Bureau of the Census
PC 80-1-D36, November 1983

Table 8 (Continued)
Occupations of Employed Persons by Age and Sex for North Dakota
(Census Week, April 1, 1980)

SEX: Female

Occupation	Age 16-19 N	16-19 %	20-29 N	20-29 %	30-44 N	30-44 %	45-59 N	45-59 %	>60 N	>60 %	Total N	Total %
MANAGERIAL & PROFESSIONAL SPECIALTY	507	4.5	8,367	21.9	7,606	25.5	4,729	22.1	1,551	19.0	22,760	20.9
Executive, Administrative, & Managerial	147		1,886		2,090		1,702		471		6,296	
Administrative, Education, & Related	8		27		125		60		31		251	
Managers, Medicine, & Health	0		22		66		55		21		164	
Managers & Administrators N.E.C. Salaried	95		707		734		635		122		2,293	
Managers & Administrators N.E.C. Self-Employed	6		90		202		207		85		590	
Management-Related Occupations	29		699		609		381		99		1,817	
Professional Specialty Occupations	360		6,481		5,516		3,027		1,080		16,464	
Engineers, Architects, and Surveyors	0		51		12		4		8		75	
Architects	0		5		0		0		0		5	
Engineers	0		35		12		2		8		57	
Mathematical & Computer Scientists	0		19		11		13		0		43	
Health Diagnosing Occupations	7		40		38		21		1		107	
Physicians	0		23		23		19		0		65	
Health Assessment & Treating	55		2,273		1,281		754		194		4,557	
Registered Nurses	14		1,810		1,067		625		166		3,682	
Teachers, Secondary	23		654		507		199		133		1,516	
TECHNICAL, SALES, & ADMINISTRATIVE SUPPORT	4,837	42.6	18,336	48.0	12,850	43.0	8,216	38.4	2,219	27.2	46,458	42.6
Technicians & Related Occupations	97		2,206		1,006		364		122		3,795	
Licensed Practical Nurses	39		928		452		111		75		1,585	
Computer Programmers	0		105		17		0		0		122	
Sales Occupations	2,518		4,093		3,089		2,435		837		13,072	
Supervisors & Proprietors	38		369		402		351		123		1,283	
Self-Employed	3		50		179		156		62		410	
Sales Representatives, Finance & Business Service	88		275		481		149		41		1,034	
Sales, Retail, & Personal Service	2,479		3,352		2,112		1,841		665		10,429	
Administrative Support Occupations	2,122		12,037		8,755		5,417		1,260		29,591	
Supervisors, Administrative Support	5		255		334		199		22		815	
Secretaries, Stenographers, & Typists	838		5,141		3,044		1,600		397		11,020	
Secretaries	678		4,556		2,757		1,592		355		9,938	
Financial Records Processing	265		2,056		2,239		1,444		355		6,410	
Bookkeeper, Accounting & Auditing Clerks	227		1,876		2,124		1,419		330		5,976	
Bank Teller	143		648		264		159		29		1,243	
Other Administrative Support Occupations	539		2,258		1,651		1,163		293		6,104	
SERVICE OCCUPATIONS	5,134	44.9	8,501	22.3	6,456	21.6	6,037	28.2	3,581	41.5	29,459	27.0
Private Household Occupations	207		415		339		256		313		1,530	
Protective Service Occupations	39		115		42		50		0		246	
Police & Detective, Public Service	0		39		0		23		0		62	
Other Service Occupations	4,858		7,971		6,053		5,731		3,068		27,683	
Food Preparation & Service	3,270		3,451		2,617		2,729		1,246		13,313	
Waiters & Food Counter Workers	2,220		1,979		961		567		176		5,903	
Cooks	488		552		904		1,344		711		3,999	
Health Service Occupations	902		2,032		1,177		1,202		567		5,880	
Nurse Aides, Orderlies, & Attendants	680		1,408		982		968		508		4,546	
Cleaning & Building Services	431		691		870		1,137		746		3,875	
Personal Service Occupations	255		1,797		1,591		663		509		4,515	
FARMING, FORESTRY, AND FISHING	307	2.7	675	1.8	1,121	3.7	1,152	5.4	299	3.7	3,554	3.3
Farm Operators & Managers	35		319		678		717		204		1,953	
Farm Occupations, Executive Managers	244		284		371		394		85		1,378	
Related Agricultural Occupations	20		72		71		41		10		214	
Forestry & Fishing Occupations	8		0		1		0		0		9	
PRECISION PRODUCTION, CRAFT & REPAIR	138	1.2	548	1.4	499	1.7	362	1.7	239	2.9	1,786	1.6
Mechanics & Repairers	12		125		69		24		6		236	
Auto Mechanics, Including Body	0		27		8		0		0		35	
Heating, Air Conditioning, & Refrigeration Mechanics	0		0		0		0		0		0	
Construction Trades	34		97		86		66		32		315	
Carpenters	6		29		3		5		6		49	
Electricians	0		2		6		5		0		13	
Extractive Occupations	0		23		7		0		0		30	
Precision Production Occupations	92		303		337		272		201		1,205	
Precision Metal Working Occupations	10		41		39		17		0		107	
Machinists	3		25		33		0		0		61	
OPERATORS, FABRICATORS, & LABORERS	462	4.1	1,750	4.6	1,354	4.5	913	4.2	458	5.6	4,937	4.5
Machine Operators, Assemblers & Inspectors	161		900		680		495		306		2,542	
Machine Operators, Assemblers & Tenders	105		552		495		366		240		1,758	
Printing Machine Operators	15		90		57		42		0		204	
Transportation & Material Moving	52		261		236		115		20		684	
Motor Vehicle Operators	41		198		203		107		7		556	
Truck Drivers & Driver-Sales Occupations	39		120		74		32		1		266	
Handlers, Equipment Cleaners & Laborers	249		589		438		303		132		1,711	
Construction Laborers	18		38		27		5		2		88	
Manufacturing Laborers	8		51		30		16		0		105	
TOTAL	11,355	100.0	38,177	100.0	29,866	100.0	21,409	100.0	8,147	99.9	108,954	99.9
ROW PERCENT	10.4		35.0		27.4		19.7		7.5		100.0	

SOURCE: "Detailed Population Characteristics," Bureau of the Census
PC 80-1-D36, November 1983

Table 8 (Continued)

Occupations of Employed Persons by Age and Sex for North Dakota
(Census Week, April 1, 1980)

SEX: Male

Occupation	Age 16-19 N	16-19 %	20-29 N	20-29 %	30-44 N	30-44 %	45-59 N	45-59 %	>60 N	>60 %	Total N	Total %
MANAGERIAL & PROFESSIONAL SPECIALTY	366	3.0	8,314	16.9	13,497	27.6	8,063	21.4	2,308	14.6	32,548	19.9
Executive, Administrative, & Managerial	185		4,115		6,856		5,056		1,359		17,571	
Administrative, Education, & Related	0		59		369		237		32		697	
Managers, Medicine, & Health	0		39		87		35		28		189	
Managers & Administrators N.E.C. Salaried	128		1,977		3,126		2,372		543		8,146	
Managers & Administrators N.E.C. Self-Employed	5		222		516		489		144		1,376	
Management-Related Occupations	42		1,125		1,349		893		284		3,693	
Professional Specialty Occupations	181		4,199		6,641		3,007		949		14,977	
Engineers, Architects, and Surveyors	12		613		876		352		96		1,949	
Architects	0		49		122		42		6		219	
Engineers	6		486		701		296		87		1,576	
Mathematical & Computer Scientists	0		94		82		15		0		191	
Health Diagnosing Occupations	0		144		609		408		174		1,335	
Physicians	0		86		431		265		112		894	
Health Assessment & Treating	15		299		311		89		59		773	
Registered Nurses	0		89		41		3		6		139	
Teachers, Secondary	0		403		729		205		50		1,387	
TECHNICAL, SALES, & ADMINISTRATIVE SUPPORT	1,416	11.7	7,611	15.5	7,739	15.8	5,501	14.6	2,141	13.5	24,408	14.9
Technicians & Related Occupations	83		1,493		1,153		482		121		3,332	
Licensed Practical Nurses	2		42		9		14		0		67	
Computer Programmers	5		151		112		22		0		290	
Sales Occupations	907		4,063		4,423		3,147		1,323		13,863	
Supervisors & Proprietors	123		768		1,084		1,056		389		3,420	
Self-Employed	0		89		314		437		185		1,025	
Sales Representatives Finance & Business Service	12		749		1,166		781		350		3,058	
Sales, Retail, & Personal Service	720		1,864		1,208		746		390		4,928	
Administrative Support Occupations	426		2,055		2,163		1,872		697		7,213	
Supervisors, Administrative Support	29		112		296		256		61		754	
Secretaries, Stenographers, & Typists	14		31		42		60		27		174	
Secretaries	12		17		30		38		25		122	
Financial Records Processing	30		220		236		152		112		750	
Bookkeeper, Accounting & Auditing Clerks	28		202		218		113		110		671	
Bank Teller	7		69		18		8		2		104	
Other Administrative Support Occupations	151		833		875		597		246		2,702	
SERVICE OCCUPATIONS	2,634	21.8	3,095	6.3	2,120	4.3	2,212	5.9	1,755	10.9	11,796	7.2
Private Household Occupations	7		13		0		6		2		28	
Protective Service Occupations	45		681		725		363		192		2,006	
Police & Detective, Public Service	15		311		316		94		19		755	
Other Service Occupations	2,582		2,401		1,395		1,843		1,541		9,762	
Food Preparation & Service	1,610		909		407		349		220		3,495	
Waiters & Food Counter Workers	79		134		17		15		6		251	
Cooks	918		282		44		57		27		1,328	
Health Service Occupations	105		224		33		87		55		504	
Nurse Aides, Orderlies, & Attendants	68		176		24		81		48		397	
Cleaning & Building Services	742		959		802		1,261		1,123		4,887	
Personal Service Occupations	125		309		153		146		143		876	
FARMING, FORESTRY, AND FISHING	2,424	20.1	7,591	15.4	9,158	18.7	11,267	29.9	6,190	39.1	36,630	22.4
Farm Operators & Managers	333		5,115		8,158		10,468		5,419		29,493	
Farm Occupations, Executive Managers	1,958		2,293		869		675		618		6,413	
Related Agricultural Occupations	115		157		103		115		148		638	
Forestry & Fishing Occupations	18		26		28		9		5		86	
PRECISION PRODUCTION, CRAFT & REPAIR	1,718	14.2	11,751	23.9	9,496	19.4	5,698	15.1	1,935	12.2	30,598	18.7
Mechanics & Repairers	766		4,184		3,472		2,018		697		11,137	
Auto Mechanics, Including Body	433		1,713		1,291		646		278		4,361	
Heating, Air Conditioning, & Refrigeration Mechanics	10		51		99		43		25		230	
Construction Trades	501		4,688		3,807		2,420		803		12,219	
Carpenters	182		1,599		1,082		698		372		3,933	
Electricians	62		820		514		247		84		1,727	
Extractive Occupations	231		1,061		588		187		29		2,096	
Precision Production Occupations	220		1,818		1,629		1,073		406		5,146	
Precision Metal Working Occupations	50		444		369		144		58		1,065	
Machinists	38		232		127		62		26		485	
OPERATORS, FABRICATORS, & LABORERS	3,511	29.1	10,789	22.0	6,918	14.1	4,934	13.1	1,534	9.7	27,686	16.9
Machine Operators, Assemblers & Inspectors	528		2,918		1,565		1,048		349		6,408	
Machine Operators, Assemblers & Tenders	283		1,407		813		566		195		3,264	
Printing Machine Operators	11		128		88		88		19		334	
Transportation & Material Moving	619		4,477		3,903		2,874		755		12,628	
Motor Vehicle Operators	423		3,010		2,646		1,792		531		8,402	
Truck Drivers & Driver-Sales Occupations	365		2,767		2,479		1,493		338		7,442	
Handlers, Equipment Cleaners & Laborers	2,364		3,394		1,450		1,012		430		8,650	
Construction Laborers	314		932		419		269		94		2,028	
Manufacturing Laborers	55		233		82		46		3		419	
TOTAL	12,069	99.9	49,151		48,928	99.9	37,675	100.0	15,843	100.0	163,666	100.0
ROW PERCENT	7.4		30.0		29.9		23.0		9.7		100.0	

SOURCE: "Detailed Population Characteristics," Bureau of the Census
PC 80-1-D36, November 1983

APPENDIX III

EMPLOYMENT ESTIMATES, TRENDS, AND PROJECTIONS

Table 9

Nonagricultural Wage and Salary Employment in North Dakota by Major Industry, History and Projections

	Annual Employment Change				Employment						Percent Change in Employment				
	1970-1975	1975-1980	1980-1983	1980-1985	Current Estimates				Projections		1980-	1981-	1982-	1983-	1984-
	Annual Change	Annual Change	Annual Change	Annual Change	1980	1981	1982	1983	1984	1985	1981	1982	1983	1984	1985
Mining	98	1,148	-327	-28	7,840	10,920	9,430	6,860	7,500	7,700	39.3	-13.6	-27.3	9.3	2.7
Construction	814	528	313	-220	16,500	14,940	15,650	17,440	15,200	15,400	-9.5	4.8	11.4	-12.8	1.3
Manufacturing	1,258	-126	-250	-54	15,570	15,300	14,940	14,820	15,100	15,300	-1.7	-2.4	-0.8	1.9	1.3
Transportation, Communication, & Public Utilities	104	812	-227	-56	16,780	17,210	16,750	16,100	16,300	16,500	2.6	-2.7	-3.9	1.2	1.2
Wholesale Trade	1/	726	-173	-46	20,630	21,230	21,110	20,110	20,200	20,400	2.9	-0.6	-4.7	0.4	1.0
Retail Trade	1/	1,316	-243	-30	46,150	45,390	45,520	45,420	45,800	46,000	-1.6	0.3	-0.2	0.8	0.4
Finance, Insurance, & Real Estate	302	580	147	150	11,450	11,730	11,770	11,890	12,000	12,200	2.4	0.3	1.0	0.9	1.7
Services	1,904	2,058	2,083	1,588	49,360	52,170	34,170	55,610	56,500	57,300	5.7	3.8	2.7	1.6	1.4
Government	1,056	1,284	63	72	60,940	60,510	60,340	61,130	61,200	61,300	-0.7	-0.3	1.3	0.1	0.7
Total	8,072	8,326	1,387	1,376	245,220	249,400	249,680	249,380	249,800	252,100	1.7	0.1	-0.1	0.2	0.8

1/ Not available as distinct categories of employment.

Table 10
Employment Change 1970-1983, and Average Covered Earnings by Industry, 1982

	Employment Change			Employment				Average Monthly Covered Wage in 1982	
	1970-1975 Annual Change	1975-1980 Annual Change	1980-1983 Annual Change	Current Estimates 1980	1981	1982	1983	$	As a % of Total Average Wage
Mining	98	1,148	-327	7,840	10,920	9,430	6,860	2,116	173.9
Construction	814	528	313	16,500	14,940	15,650	17,440	1,719	141.2
Manufacturing	1,258	-126	-250	15,570	15,300	14,940	14,820	1,397	114.8
Transportation, Communications, & Public Utilities	104	812	-227	16,780	17,210	16,750	16,100	1,731	142.2
Wholesale Trade	1/	726	-173	20,630	21,230	21,110	20,110	1,462	120.1
Retail Trade	1/	1,316	-243	46,150	45,390	45,520	45,420	703	57.8
Finance, Insurance, & Real Estate	302	580	147	11,450	11,730	11,770	11,890	1,252	102.9
Services	1,904	2,058	2,083	49,360	52,170	54,170	55,610	999	82.1
Government	1,056	1,284	63	60,940	60,510	60,340	61,130	1,284	105.5
Total	8,072	8,326	1,387	245,220	249,400	249,680	249,380	1,217	100.0

1/ Not available as separate categories of employment.

Table 11
Average Growth During 1979-1982 in Covered Employment by Industry for Urban and Rural Portions of North Dakota

	Mining	Construc-tion	Manufac-turing	Transport., Commun., & Public Utilities	Whole-Sale Trade	Retail Trade	Finance, Insurance & Real Estate	Services	Govt.	Total*
Urban Counties*	820	-766	-181	530	342	308	238	2,276	569	4,137
Rural Counties	471	12	-19	193	-147	-194	129	265	-176	532
SNG Plant Const. Counties**	93	232	-1	152	-10	-25	19	53	28	425
Other Rural Counties	378	-220	-18	41	137	-169	110	212	-204	107
Multi County***	-37	-213	-375	-234	-310	-316	-115	-606	-464	-2,670
State Total	1,254	-967	-575	489	-115	-202	252	1,935	-71	1,999

* For purposes of this analysis, urban counties include Williams, Ward, Ramsey, Grand Forks, Cass, Stutsman, Burleigh, Morton, and Stark.

** Synthetic Natural Gas construction counties include McLean, Mercer, and Oliver.

*** "Multi county" designation may refer to jobs worked in more than one county. On the other hand, this designation may reflect an inability to allocate employment to a particular county. From 1980 to 1981, the number of multi county jobs decreased substantially (-7,309) due in large part to a simplification in the way employment statistics were collected. Prior to 1981, employment was measured in terms of a job holder's county of residence. Since 1981, however, employment has been measured by place of work. The measurement of employment by place of work is less difficult than measurement by a worker's place of residence, and since 1981 the number of multi county jobs has come more and more to reflect the concept of jobs worked in several counties rather than an inability to allocate jobs to their appropriate counties.

Table 12
Numeric Change and Average Growth in Nonagricultural Wage and Salary Employment by County and Industry, 1979-1982*

	Mining				Construction				Manufacturing				Transportation, 2/ Commun., Pub. Utilities			
REGION I	79-80	80-81	81-82	$\bar{x}$	79-80	80-81	81-82	$\bar{x}$	79-80	80-81	81-82	$\bar{x}$	79-80	80-81	81-82	$\bar{x}$
Williams	827	1,470	-530	589	147	375	-236	95	29	47	-3	24	209	182	23	138
Divide	8	113	-26	32	-14	-4	0	-6	-15	1	-1	-5	-5	0	3	-1
McKenzie	394	567	-305	219	56	120	-80	32	1	2	5	3	62	58	12	44
TOTAL	1,229	2,150	-861	840	189	491	-316	121	15	50	1	22	266	240	38	181
REGION II																
Ward	61	29	-77	4	-63	-188	-100	-117	75	-16	-61	-1	46	22	-18	17
Bottineau	-42	95	-38	5	-24	12	-25	-12	0	10	-12	-1	6	17	-6	6
Burke	-21	49	35	21	-8	3	-7	-4	-7	-1	0	-3	3	4	7	5
McHenry	6	37	0	14	-36	49	-47	-11	-1	10	39	16	-18	-8	-5	-10
Mountrail	8	11	8	9	8	4	-29	-6	27	-1	-14	4	-2	-8	7	-1
Pierce	2	2	0	1	-7	-5	-6	-6	-33	18	-35	-17	19	10	-15	5
Renville	29	16	-37	3	-20	1	-3	-7	0	-1	0	0	6	11	-13	1
TOTAL	43	239	-109	57	-150	-124	-217	-163	61	19	-83	-1	60	48	-43	23
REGION III																
Ramsey	-1	0	0	0	-28	-31	-16	-25	-2	1	25	8	-3	-17	-6	-9
Benson	-1	0	1	0	-35	35	-25	-8	-78	5	71	-1	-12	-4	-2	-6
Cavalier	0	-1	0	0	-32	0	7	-8	10	-20	-2	-4	-31	0	1	-10
Towner	0	0	0	0	34	-38	-13	-6	-7	61	4	19	11	2	-3	3
Eddy	-16	-3	-1	-7	-46	-6	-7	-20	-2	0	6	1	-3	-2	-1	-2
Rolette	0	1	5	2	-41	4	30	-2	11	-1	0	0	-1	-6	-1	-3
TOTAL	-16	-3	5	-5	-148	-36	-24	-69	-68	36	104	24	-39	-27	-12	-27
REGION IV																
Grand Forks	2	12	-4	3	-224	-99	-102	-142	-161	-45	60	-49	67	-6	-53	3
Nelson	-1	0	0	0	-2	17	-33	-6	-3	-2	-11	-5	-8	-7	3	-4
Walsh	-5	11	-19	-4	-66	4	-36	-33	-63	-16	37	-14	-25	28	11	5
Pembina	0	0	0	0	-61	17	11	-11	260	47	-33	85	34	-9	-46	-7
TOTAL	-4	23	-23	-1	-353	-61	-160	-192	33	-16	33	17	68	6	-85	-3
REGION V																
Cass	1	18	-11	3	-334	-360	-235	-310	334	121	-251	68	335	175	64	191
Traill	-2	-3	6	0	-21	-1	1	-7	22	-44	28	2	-4	-8	0	-4
Steele	0	2	-2	0	1	-6	-4	-3	-6	-1	0	-2	0	-2	-11	-4
Ransom	0	0	0	0	7	3	88	33	-171	-47	43	-58	3	-9	-3	-3
Richland	0	1	0	0	-73	-11	-40	-41	82	107	-61	43	29	21	-6	15
Sargent	0	0	0	0	4	-16	6	-2	119	17	-143	-2	6	1	-1	2
TOTAL	-1	18	-7	3	-416	-391	-184	-330	380	153	-384	50	369	178	43	197
REGION VI																
Stutsman	-1	-11	1	-4	-159	-95	-55	-103	-90	-41	-55	-62	28	26	-31	8
Wells	2	15	-1	5	-33	6	-4	-10	-22	-2	4	-7	1	-10	-9	-6
McIntosh	-1	10	-9	0	-17	25	29	12	-15	-11	-11	-12	2	5	5	4
Logan	0	1	-1	0	-4	-5	-6	-5	-2	-3	0	-2	-8	-1	2	-2
Foster	6	-2	2	2	-19	-22	-6	-16	7	2	-4	2	12	-3	1	3
Dickey	0	0	1	0	-5	-11	-11	-9	-73	-24	-17	-38	15	9	5	10
LaMoure	1	0	0	0	-14	-4	-12	-10	-16	-6	2	-7	11	-4	-7	0
Barnes	1	-1	0	0	-98	-60	-17	-58	-50	20	18	-4	-16	-10	-6	-11
Griggs	0	1	-1	0	1	-10	2	-2	12	2	-33	-6	7	-5	-3	0
TOTAL	8	13	-8	4	-350	-176	-80	-202	-250	-63	-96	-136	52	7	-43	6
REGION VII																
Burleigh	18	-57	-40	-26	-128	-410	-91	-210	-205	-139	-59	-134	70	1	86	52
McLean	40	32	20	31	-709	-139	36	-271	-8	4	12	3	55	5	10	23
Sheridan	0	1	19	7	-17	-10	-1	-9	-4	-3	10	1	-5	0	3	-1
Kidder	-1	0	-1	-1	1	-18	-4	-7	-4	0	1	-1	-9	-3	0	-4
Emmons	-2	2	-3	-1	25	-8	56	24	-13	-4	4	-4	-3	-3	4	-1
Morton	48	-49	-13	-5	-90	-149	-29	-89	-128	21	75	-11	-31	-23	29	-8
Mercer	114	22	40	59	351	-359	1,505	499	-3	-4	-1	-3	81	76	117	91
Oliver	31	7	-30	3	59	-88	42	4	-3	-1	1	-1	90	26	-1	38
Grant	13	-9	2	2	-23	-1	2	-7	-1	3	-8	-2	-2	-3	-1	-2
Sioux	-1	0	3	1	18	-22	-6	-3	5	-2	6	3	4	-2	0	1
TOTAL	260	-51	-3	70	-513	-1,204	1,510	-69	-364	-125	41	-149	250	74	247	190
REGION VIII																
Stark	86	586	96	256	97	68	240	135	-26	-28	-17	-24	210	108	96	138
Slope	54	-32	-16	2	-2	0	1	0	0	0	0	0	0	0	0	0
Hettinger	30	-14	-2	5	-22	6	-4	-7	-11	-7	1	-6	-7	-5	0	-4
Golden Valley	12	-3	-34	-8	10	11	-17	1	0	3	4	2	0	-8	24	5
Dunn	95	49	-41	34	13	42	81	45	2	2	2	2	23	2	29	18
Bowman	8	32	-15	8	1	-6	-4	-3	-2	-1	5	1	-9	2	1	-2
Billings	262	-26	-174	21	-23	1	-23	-15	-1	0	0	0	0	9	11	7
Adams	13	-12	17	6	-2	-15	-3	-7	28	-33	3	-1	-6	-6	-4	-5
TOTAL	560	580	-169	524	72	107	271	150	-10	-64	-2	-25	211	102	197	157
MULTI-COUNTY 1/	1,073	-1,056	-129	-37	847	-1,563	77	-213	-232	-910	16	-375	106	-823	16	-234
STATE TOTAL	3,152	1,913	-1,304	1,254	-822	-2,957	877	-967	-435	-920	-370	-575	1,343	-145	518	489

* See footnotes at end of table.

Table 12 (continued)

REGION I	Wholesale Trade				Retail Trade				Finance, Insurance, and Real Estate				Services			
	79-80	80-81	81-82	$\bar{x}$	79-80	80-81	81-82	$\bar{x}$	79-80	80-81	81-82	$\bar{x}$	79-80	80-81	81-82	$\bar{x}$
Williams	112	309	97	173	211	170	222	201	61	84	46	64	253	391	152	265
Divide	-10	1	-1	-3	27	-3	-3	7	5	4	7	5	-4	21	17	11
McKenzie	-56	-44	13	8	43	97	11	50	-1	6	9	5	121	39	-28	44
TOTAL	46	322	109	159	281	264	230	258	65	94	62	74	370	451	141	321
REGION II																
Ward	-279	82	-17	-71	361	-201	160	107	22	-5	-15	-1	-6	365	95	151
Bottineau	-5	21	-3	4	-35	-27	-4	-22	5	5	2	4	6	19	47	24
Burke	-4	-6	-1	-4	9	8	-12	2	-1	0	4	1	-15	-10	10	-5
McHenry	-16	3	-4	-6	-28	-11	-3	-14	1	9	0	3	-41	-13	0	-18
Mountrail	-24	11	30	6	-8	-7	7	-3	5	4	-1	3	-115	-9	21	-34
Pierce	-11	9	18	5	-29	-3	23	-3	7	10	-6	4	40	-10	-14	5
Renville	-13	3	-3	-4	-7	-12	6	-4	5	1	0	2	8	7	-4	4
TOTAL	-352	123	20	-70	263	-253	177	63	44	24	-16	17	-123	349	155	127
REGION III																
Ramsey	-3	21	10	9	46	-188	-16	-53	-12	5	0	-2	45	18	38	34
Benson	-15	-8	-4	-9	-7	-4	-11	-7	-7	4	1	-1	-46	41	-42	-16
Cavalier	-30	4	-7	-11	-20	1	2	-6	8	-1	0	2	-5	-15	-20	-13
Towner	-16	9	-7	-5	-6	-4	1	-3	3	5	1	3	-6	4	-2	-1
Eddy	-1	-4	-10	-5	-11	-12	-12	-12	-5	2	2	0	-7	17	21	10
Rolette	-17	8	-2	-4	-10	11	-2	0	2	7	1	3	-40	119	-91	-4
TOTAL	-82	30	-20	-24	-8	-196	-38	-81	-11	22	5	5	-59	184	-96	10
REGION IV																
Grand Forks	-36	118	-12	23	35	-196	43	-39	16	-22	-37	-14	532	407	209	383
Nelson	-7	7	-7	2	-2	10	3	4	8	1	2	4	-6	5	-6	-2
Walsh	-25	8	15	-1	19	-93	26	-16	20	2	16	13	16	35	-38	4
Pembina	-14	21	-6	0	-7	16	-13	-1	0	10	0	3	149	-8	28	56
TOTAL	-82	154	-10	20	45	-263	59	-53	44	-9	-19	5	691	439	193	441
REGION V																
Cass	274	306	-10	190	227	-450	93	-43	321	73	-37	119	1,067	709	717	831
Traill	-7	24	-13	1	-15	-13	24	-1	14	6	3	8	4	23	30	19
Steele	-9	-3	-4	-5	4	1	-5	0	4	0	0	1	-17	-7	-1	-8
Ransom	3	31	-26	3	-17	-37	-17	-24	-1	-2	1	0	-1	9	44	17
Richland	3	16	9	9	33	-23	-30	-7	16	-8	-1	2	-12	-15	32	2
Sargent	-6	-12	6	-4	-10	6	12	3	5	2	1	3	-5	1	12	3
TOTAL	258	362	-38	194	222	-516	77	-72	359	71	-33	132	1,036	720	834	864
REGION VI																
Stutsman	-75	-43	-28	-49	-116	136	0	7	43	-7	-5	10	106	81	34	74
Wells	1	1	-16	-5	-34	-6	-5	-15	6	5	7	6	42	17	-13	15
McIntosh	-6	-1	6	0	-6	3	3	0	-1	1	8	3	28	13	2	14
Logan	-22	2	-9	-10	-10	-19	0	-10	2	-2	1	0	-10	-4	-4	-6
Foster	22	-1	1	7	-20	-6	6	-7	-2	4	6	3	-7	17	19	10
Dickey	-4	-16	-15	-12	33	-6	-30	-1	1	7	-3	2	-43	-24	5	-21
LaMoure	-36	-2	-2	-13	1	-7	-1	-2	9	1	-2	3	2	-3	-8	-3
Barnes	-32	-49	-10	-30	-59	-58	-22	-46	0	12	0	4	6	32	48	29
Griggs	-1	7	-4	1	-2	-15	4	-4	6	-2	2	2	-1	9	7	5
TOTAL	-153	-102	-77	-111	-213	22	-45	-79	64	19	14	33	123	138	90	117
REGION VII																
Burleigh	-6	96	42	44	145	-161	81	22	91	27	3	40	573	328	292	398
McLean	-9	-4	-16	-10	-37	-5	-4	-16	6	7	5	6	10	-23	3	-3
Sheridan	-5	5	-1	0	-15	-2	-22	-13	1	-2	0	0	-11	-4	4	-4
Kidder	-6	-6	-7	-6	-10	19	-1	-10	1	1	-1	0	-7	2	-1	-2
Emmons	1	-5	2	-1	-21	-6	5	-8	6	1	0	2	13	20	13	15
Morton	5	16	-91	-24	-21	-87	-45	-51	-37	4	-4	-12	-195	-1	66	-43
Mercer	7	2	6	5	-22	-9	18	-4	14	12	8	11	54	41	105	67
Oliver	-11	-4	-1	-5	-10	-6	1	-5	4	1	0	2	-39	-2	7	-11
Grant	-5	-1	-3	-3	-12	-7	18	0	2	1	1	1	-4	-4	-6	-5
Sioux	-2	6	-5	0	0	1	4	1	1	-2	2	0	32	15	-51	-1
TOTAL	-51	103	-74	0	-4	-303	53	-85	89	50	14	51	426	372	432	411
REGION VIII																
Stark	17	104	19	47	227	114	130	157	49	19	35	34	105	259	185	183
Slope	0	0	0	0	1	-4	-4	-2	-4	-1	0	-2	-7	-2	0	-3
Hettinger	-3	21	3	7	-5	-26	1	-10	4	4	4	4	-17	-2	13	-2
Golden Valley	-5	3	1	0	25	25	-38	4	3	3	2	3	23	11	17	17
Dunn	39	7	-39	2	13	15	-8	7	4	3	3	3	8	18	2	9
Bowman	11	9	10	10	6	-18	7	-2	6	5	4	5	16	11	0	9
Billings	-78	2	-3	-26	10	6	0	5	-2	0	0	-1	79	0	-6	24
Adams	-19	-21	3	-13	-1	9	2	3	2	5	3	3	30	17	-2	15
TOTAL	-38	123	-6	27	276	121	90	162	62	38	51	50	237	312	209	252
MULTI-COUNTY	-127	-838	36	-310	-802	-160	14	-316	-276	-71	1	-115	-1,112	-670	-36	-606
STATE TOTAL	-561	277	-60	-115	60	-1,284	617	-202	440	238	79	252	1,589	2,295	1,922	1,935

Table 12 (continued)

	Government 3/				Total**			
REGION I	79-80	80-81	81-82	$\bar{x}$	79-80	80-81	81-82	$\bar{x}$
Williams	11	15	131	52	1,860	3,043	-98	1,602
Divide	-13	1	-8	-7	-21	134	-12	34
McKenzie	7	22	14	14	-627	923	-349	400
TOTAL	5	38	137	58	2,466	4,100	-459	2,036
REGION II								
Ward	-37	-82	-9	-43	180	6	-42	48
Bottineau	8	-3	-6	0	-81	149	-45	8
Burke	13	-14	-4	-2	-31	33	32	11
McHenry	-20	-19	-15	-18	-153	57	-35	-44
Mountrail	-12	-31	-1	-15	-113	-26	28	-37
Pierce	-11	0	-13	-8	-23	31	-48	-13
Renville	-1	-7	0	-3	7	19	-54	-9
TOTAL	-60	-156	-48	-89	-214	269	-164	-36
REGION III								
Ramsey	-4	-34	-14	-17	38	-225	21	-55
Benson	-15	-1	-21	-12	-214	68	-32	-59
Cavalier	-11	-28	-7	-15	-111	-60	-26	-66
Towner	-8	-1	-7	-5	5	38	-26	6
Eddy	-1	-10	-16	-9	-92	-18	-18	-43
Rolette	22	-9	18	10	-74	124	-42	3
TOTAL	-17	-83	-47	-49	-448	-73	-123	-214
REGION IV								
Grand Forks	127	48	39	71	358	217	143	239
Nelson	6	-9	-15	-6	-15	22	-64	-19
Walsh	-19	73	171	75	-148	52	183	29
Pembina	-10	-58	6	-21	351	42	-75	105
TOTAL	104	54	201	119	546	327	189	354
REGION V								
Cass	1,297	267	-288	425	3,522	859	42	1,474
Traill	-12	3	-21	-10	-21	-13	58	8
Steele	-22	-2	3	-7	-45	-18	-24	-29
Ransom	-42	-9	-6	-19	-219	-61	124	-52
Richland	41	34	-23	17	119	121	-120	40
Sargent	1	6	7	5	114	5	-100	6
TOTAL	1,263	299	-328	411	3,470	894	-20	1,447
REGION VI								
Stutsman	25	-20	-38	-11	-240	26	-177	-130
Wells	11	-27	-17	-11	-26	-1	-54	-27
McIntosh	-7	-16	-12	-12	-25	29	21	8
Logan	-3	-17	-26	-15	-57	-48	-43	-49
Foster	-26	-20	-12	-19	-27	-31	13	-15
Dickey	-9	0	-19	-9	-85	-65	-84	-78
LaMoure	-7	0	-12	-6	-49	-25	-42	-39
Barnes	-8	-55	-31	-31	-256	-169	-20	-148
Griggs	0	-16	-12	-9	22	-29	-38	-15
TOTAL	-24	-171	-179	-125	-743	-313	-424	-493
REGION VII								
Burleigh	379	291	-218	151	937	-24	96	336
McLean	0	-20	-7	-9	-652	-145	59	-246
Sheridan	-7	-17	-7	-10	-61	-34	5	-30
Kidder	2	-22	-7	-9	-33	-65	-21	-40
Emmons	-23	-5	-3	-10	-17	-8	76	17
Morton	-101	-145	-107	-118	-552	-413	-119	-361
Mercer	32	27	27	29	628	-192	1,825	754
Oliver	12	9	5	8	135	-58	22	32
Grant	-4	-4	-6	-5	-36	-25	-1	-21
Sioux	24	-1	-8	5	80	-7	-55	6
TOTAL	314	113	-333	32	427	-971	1,887	447
REGION VIII								
Stark	79	53	41	58	844	1,283	825	984
Slope	9	-2	1	3	51	-41	-18	-3
Hettinger	-12	-11	2	-7	-43	-34	18	-20
Golden Valley	-2	3	8	3	66	48	-33	27
Dunn	-17	-4	-3	-8	180	134	26	113
Bowman	-6	-4	-10	-7	31	30	-2	20
Billings	-4	-11	8	-2	243	-19	-187	12
Adams	-4	-12	-5	-7	41	-70	14	-5
TOTAL	43	12	42	33	1,413	1,331	643	1,128
MULTI-COUNTY	-164	-1,218	-11	-464	-687	-7,309	-16	-2,670
STATE TOTAL	1,464	-1,112	-566	-71	6,230	-1,745	1,515	1,999

** Totals may not add due to rounding.

1/ Prior to 1981, employment data were collected by place of residence. Since 1981, employment data have been collected by place of work. This shift in data collection better enables jobs to be allocated to their appropriate counties, making the term "multi-county" more accurately reflect the concept of jobs worked in more than one county.

2/ Excludes railroad employment.

3/ Excludes military employment.

Table 13
Nonagricultural Job Insurance Covered Wage and Salary Employment
by Industry and County, 1982 Annual Averages*

	Mining	Const.	Mfg.	Trans., 1/ Comm., Ut.	Whole. Trade	Retail Trade	Fin., Ins., RE	Service	Govt. 2/	Total** Number	Total** Percent
REGION I											
Williams	3,115	906	525	985	1,382	2,405	492	2,398	1,371	13,579	
Divide	143	12	8	11	68	158	54	209	172	835	
McKenzie	1,408	258	23	234	170	355	58	440	392	3,338	
TOTAL	4,666	1,176	556	1,230	1,620	2,918	604	3,047	1,935	17,752	7.8
ROW PERCENT	26.3	6.6	3.1	6.9	9.1	16.4	3.4	17.2	10.9	99.9	
REGION II											
Ward	170	1,032	832	934	1,752	4,841	905	4,480	3,777	18,723	
Bottineau	155	68	88	113	215	399	102	481	579	2,200	
Burke	180	11	12	72	73	119	47	42	250	806	
McHenry	78	95	94	100	123	172	67	84	393	1,206	
Mountrail	76	69	72	76	172	388	75	437	526	1,891	
Pierce	4	49	85	81	184	427	80	438	267	1,615	
Renville	63	18	4	29	73	87	27	163	220	684	
TOTAL	726	1,342	1,187	1,405	2,592	6,433	1,303	6,125	6,012	27,125	11.9
ROW PERCENT	2.7	4.9	4.4	5.2	9.5	23.7	4.8	22.6	22.2	100.0	
REGION III											
Ramsey	0	211	148	159	406	1,156	190	1,098	1,062	4,430	
Benson	3	76	441	16	109	103	71	271	396	1,486	
Cavalier	0	59	25	102	152	292	89	284	337	1,340	
Towner	0	32	82	54	134	151	65	182	202	902	
Eddy	15	13	16	13	72	131	50	202	172	684	
Rolette	10	191	245	64	114	420	109	690	1,340	3,183	
TOTAL	28	582	957	408	987	2,253	574	2,727	3,509	12,025	5.3
ROW PERCENT	0.2	4.8	8.0	3.4	8.2	18.7	4.8	22.7	29.2	100.0	
REGION IV											
Grand Forks	36	1,122	1,234	1,332	1,341	5,985	988	5,187	6,192	23,417	
Nelson	0	57	44	28	177	216	71	278	317	1,188	
Walsh	15	208	153	202	374	891	243	718	1,540	4,344	
Pembina	0	147	574	160	234	528	116	592	597	2,948	
TOTAL	51	1,534	2,005	1,722	2,126	7,620	1,418	6,775	8,646	31,897	14.0
ROW PERCENT	0.2	4.8	6.3	5.4	6.7	23.9	4.4	21.2	27.1	100.0	
REGION V											
Cass	14	1,996	3,377	2,946	5,804	8,593	3,187	10,767	7,459	44,143	
Traill	9	69	314	117	306	440	145	597	544	2,541	
Steele	0	22	37	35	81	77	49	13	169	483	
Ransom	0	167	76	48	188	331	83	355	340	1,588	
Richland	4	230	1,381	228	456	869	183	671	1,280	5,302	
Sargent	0	36	667	46	95	128	44	97	281	1,394	
TOTAL	27	2,520	5,852	3,420	6,930	10,438	3,691	12,500	10,073	55,451	24.3
ROW PERCENT	0.0	4.5	10.6	6.2	12.5	18.8	6.7	22.5	18.2	100.0	
REGION VI											
Stutsman	4	286	968	503	486	1,846	441	1,866	1,910	8,310	
Wells	28	70	30	27	224	340	87	337	333	1,476	
McIntosh	1	68	62	34	174	186	68	309	229	1,131	
Logan	0	24	12	6	120	83	24	51	155	475	
Foster	14	68	45	94	161	265	86	317	241	1,291	
Dickey	1	61	100	95	201	368	80	454	388	1,748	
LaMoure	1	16	24	57	234	210	95	115	354	1,106	
Barnes	0	203	174	108	410	859	171	816	853	3,594	
Griggs	0	21	42	17	120	127	55	151	164	697	
TOTAL	49	817	1,457	941	2,130	4,284	1,107	4,416	4,627	19,828	8.7
ROW PERCENT	0.2	4.1	7.4	4.8	10.7	21.6	5.6	22.3	23.3	100.0	
REGION VII											
Burleigh	183	1,415	1,155	2,068	1,927	5,408	1,305	6,633	5,948	26,042	
McLean	250	302	72	351	211	468	117	512	666	2,949	
Sheridan	21	14	25	5	34	33	34	29	142	337	
Kidder	0	6	19	22	41	58	32	93	192	463	
Emmons	0	154	37	29	115	172	48	207	315	1,077	
Morton	58	497	821	502	496	1,396	244	1,405	1,196	6,615	
Mercer	568	3,392	26	630	167	427	101	584	472	6,367	
Oliver	109	127	3	195	2	26	9	15	152	638	
Grant	7	14	4	14	48	124	42	128	191	572	
Sioux	3	12	32	6	28	41	10	247	411	790	
TOTAL	1,199	5,933	2,194	3,822	3,069	8,153	1,942	9,853	9,685	45,850	20.1
ROW PERCENT	2.6	12.9	4.8	8.3	6.7	17.8	4.2	21.5	21.1	99.9	
REGION VIII											
Stark	1,391	1,034	531	808	804	2,538	433	2,456	1,408	11,403	
Slope	55	1	0	0	0	5	0	1	48	110	
Hettinger	26	64	24	27	128	140	57	156	229	851	
Golden Valley	50	23	39	35	71	155	43	149	149	714	
Dunn	308	218	11	101	90	142	34	75	245	1,224	
Bowman	267	56	19	40	187	265	66	236	221	1,357	
Billings	413	51	0	20	2	39	0	84	106	715	
Adams	19	40	30	35	132	181	45	309	160	951	
TOTAL	2,529	1,487	654	1,066	1,414	3,465	678	3,466	2,566	17,325	7.6
ROW PERCENT	14.6	8.6	3.8	6.1	8.2	20.0	3.9	20.0	14.8	100.0	
MULTI COUNTY	153	249	46	63	182	24	11	61	61	850	0.3
STATE TOTAL	9,428	15,640	14,908	14,077	21,050	45,588	11,328	48,970	47,114	228,105	100.0
ROW PERCENT	4.1	6.9	6.5	6.2	9.2	20.0	5.0	21.5	20.6	100.0	

* By place of work.
** Totals may not add due to rounding.
1/ Excludes railroad employment.
2/ Excludes military employment.

Table 14
Nonagricultural Job Insurance Covered Wage and Salary Employment
by Industry and County, 1981 Annual Averages*

	Mining	Const.	Mfg.	Trans., 1/ Comm., UE.	Whole. Trade	Retail Trade	Fin., Ins., RE	Service	Govt. 2/	Total** Number	Total** Percent
REGION I											
Williams	3,645	1,142	528	962	1,285	2,183	446	2,246	1,240	13,677	
Divide	169	12	9	8	69	161	47	192	180	847	
McKenzie	1,713	338	18	222	157	344	49	468	378	3,687	
TOTAL	5,527	1,492	555	1,192	1,511	2,688	542	2,906	1,798	18,211	
ROW PERCENT	30.3	8.2	3.0	6.5	8.3	14.8	3.0	16.0	9.9	100.0	8.0
REGION II											
Ward	247	1,132	893	952	1,769	4,681	920	4,385	3,786	18,765	
Bottineau	193	93	100	119	216	403	100	434	585	2,245	
Burke	145	18	12	65	74	131	43	32	254	774	
McHenry	78	142	55	105	127	175	57	84	408	1,241	
Mountrail	68	98	86	69	142	381	76	416	527	1,863	
Pierce	4	55	120	96	166	404	86	452	280	1,663	
Renville	100	21	4	42	76	81	27	167	220	738	
TOTAL	835	1,559	1,270	1,448	2,572	6,256	1,319	5,970	6,060	27,289	
ROW PERCENT	3.1	5.7	4.7	5.3	9.4	22.9	4.8	21.9	22.2	100.0	12.1
REGION III											
Ramsey	0	227	123	165	396	1,172	190	1,060	1,076	4,409	
Benson	2	101	370	18	113	114	70	313	417	1,518	
Cavalier	0	52	27	101	159	290	89	304	344	1,366	
Towner	0	45	78	57	141	150	64	184	209	928	
Eddy	16	20	10	14	82	143	48	181	188	702	
Rolette	5	161	245	65	116	422	108	781	1,322	3,225	
TOTAL	23	606	853	420	1,007	2,291	569	2,823	3,556	12,148	
ROW PERCENT	0.2	5.0	7.0	3.5	8.3	18.8	4.7	23.2	29.3	100.0	5.4
REGION IV											
Grand Forks	40	1,224	1,174	1,385	1,353	5,942	1,025	4,978	6,153	23,274	
Nelson	0	90	55	25	184	213	69	284	332	1,252	
Walsh	34	244	116	191	359	865	227	756	1,369	4,161	
Pembina	0	136	627	206	240	541	116	564	591	3,021	
TOTAL	74	1,694	1,972	1,807	2,136	7,561	1,437	6,582	8,445	31,708	
ROW PERCENT	0.2	5.3	6.2	5.7	6.8	23.9	4.5	20.8	26.6	100.0	14.0
REGION V											
Cass	25	2,231	3,628	2,882	5,814	8,500	3,224	10,050	7,747	44,101	
Traill	3	68	286	117	319	416	142	567	565	2,483	
Steele	2	26	37	46	85	82	49	14	166	507	
Ransom	0	79	33	51	214	348	82	311	346	1,464	
Richland	4	270	1,442	234	447	899	184	639	1,303	5,422	
Sargent	0	30	810	47	89	116	43	85	274	1,494	
TOTAL	34	2,704	6,236	3,377	6,968	10,361	3,724	11,666	10,401	55,471	
ROW PERCENT	0.1	4.9	11.2	6.1	12.6	18.7	6.7	21.0	18.7	100.0	24.5
REGION VI											
Stutsman	3	341	1,023	534	514	1,846	446	1,832	1,948	8,487	
Wells	29	74	26	36	240	245	80	350	350	1,530	
McIntosh	10	39	73	29	168	183	60	307	241	1,110	
Logan	1	30	12	4	129	83	23	55	181	518	
Foster	12	74	49	93	160	259	80	298	253	1,278	
Dickey	0	72	117	90	216	398	83	449	407	1,832	
LaMoure	1	28	22	64	236	211	97	123	366	1,148	
Barnes	0	220	156	114	420	881	171	768	884	3,614	
Griggs	1	19	75	20	124	123	53	144	176	735	
TOTAL	57	897	1,553	984	2,207	4,329	1,093	4,326	4,806	20,252	
ROW PERCENT	0.3	4.4	7.7	4.9	10.9	21.4	5.4	21.3	23.7	100.0	8.9
REGION VII											
Burleigh	223	1,506	1,214	1,982	1,885	5,327	1,302	6,341	6,166	25,946	
McLean	230	266	60	341	227	472	112	509	673	2,890	
Sheridan	2	15	15	2	35	55	34	25	149	332	
Kidder	1	10	18	22	48	59	33	94	199	484	
Emmons	3	98	33	25	113	169	48	194	318	1,001	
Morton	71	526	746	473	587	1,441	248	1,339	1,303	6,734	
Mercer	528	1,887	27	513	161	409	93	479	445	4,542	
Oliver	139	85	2	196	3	25	9	8	149	616	
Grant	5	12	12	15	51	106	41	134	197	573	
Sioux	0	18	26	6	33	37	8	298	419	845	
TOTAL	1,202	4,423	2,153	3,575	3,143	8,100	1,928	9,421	10,018	43,963	
ROW PERCENT	2.7	10.1	4.9	8.1	7.2	18.4	4.4	21.4	22.8	100.0	19.3
REGION VIII											
Stark	1,295	794	548	712	785	2,408	398	2,271	1,367	10,578	
Slope	71	0	0	0	0	9	0	1	47	128	
Hettinger	28	68	23	27	125	139	53	143	227	833	
Golden Valley	80	40	35	11	70	193	41	132	141	747	
Dunn	349	157	9	72	129	150	31	73	248	1,198	
Bowman	282	60	14	39	177	258	62	236	231	1,359	
Billings	587	74	0	9	5	39	0	90	98	902	
Adams	2	43	27	39	129	179	42	311	165	937	
TOTAL	2,698	1,216	656	909	1,420	3,375	627	3,257	2,524	16,682	
ROW PERCENT	16.2	7.3	3.9	5.5	8.5	20.2	3.8	19.5	15.1	100.0	7.4
MULTI-COUNTY	282	172	30	47	146	10	10	97	72	866	0.4
STATE TOTAL	10,732	14,763	15,278	13,759	21,110	44,971	11,249	47,048	47,680	226,590	100.0
ROW PERCENT	4.7	6.5	6.7	6.1	9.3	19.9	5.0	20.8	21.0	100.0	

* By place of work.
** Totals may not add due to rounding.
1/ Excludes railroad employment.
2/ Excludes military employment.

Table 15
Nonagricultural Job Insurance Covered Wage and Salary
Employment by Industry and County, 1980 Annual Average*

	Mining	Const.	Mfg.	Trans., Comm., Ut. 1/	Whole. Trade	Retail Trade	Fin, Ins., RE	Services	Govt. 2/	Total ** Number	Total ** Percent
REGION I											
Williams	2,175	767	481	780	976	2,013	362	1,855	1,225	10,634	
Divide	56	16	8	8	68	164	43	171	179	713	
McKenzie	1,146	218	16	164	145	247	43	429	356	2,764	
TOTAL	3,377	1,001	505	952	1,189	2,424	448	2,455	1,760	14,111	
ROW PERCENT	23.9	7.1	3.6	6.8	8.4	17.2	3.2	17.4	12.4	100.0	6.2
REGION II											
Ward	218	1,320	909	930	1,687	4,882	925	4,020	3,868	18,759	
Bottineau	98	81	90	102	197	430	95	415	588	2,096	
Burke	96	15	13	61	80	123	43	42	268	741	
McHenry	41	93	45	113	124	186	58	97	427	1,184	
Mountrail	57	94	87	77	131	388	72	425	558	1,889	
Pierce	2	60	102	86	157	407	76	462	280	1,632	
Renville	84	20	5	31	73	93	26	160	227	719	
TOTAL	596	1,683	1,251	1,400	2,449	6,509	1,295	5,621	6,216	27,020	
ROW PERCENT	2.2	6.2	4.6	5.2	9.1	24.1	4.8	20.8	23.0	100.0	11.8
REGION III											
Ramsey	0	258	122	182	375	1,360	185	1,042	1,110	4,634	
Benson	2	66	365	22	121	118	66	272	418	1,450	
Cavalier	1	52	47	101	155	289	90	319	372	1,426	
Towner	0	83	17	55	132	154	59	180	210	890	
Eddy	19	26	10	16	86	155	46	164	198	720	
Rolette	4	157	256	71	108	411	101	662	1,331	3,101	
TOTAL	26	642	817	447	977	2,487	547	2,639	3,639	12,221	
ROW PERCENT	0.2	5.2	6.7	3.6	8.0	20.4	4.5	21.6	29.8	100.0	5.4
REGION IV											
Grand Forks	28	1,323	1,219	1,391	1,235	6,138	1,047	4,571	6,105	23,057	
Nelson	0	73	57	32	177	203	68	279	341	1,230	
Walsh	23	240	132	163	351	958	225	721	1,296	4,109	
Pembina	0	119	580	215	219	525	106	572	649	2,985	
TOTAL	51	1,755	1,988	1,801	1,982	7,824	1,446	6,143	8,391	31,581	
ROW PERCENT	0.2	5.6	6.3	5.7	6.3	24.9	4.6	19.6	26.8	100.0	13.7
REGION V											
Cass	7	2,591	3,507	2,707	5,508	8,950	3,151	9,341	7,480	43,242	
Traill	6	69	330	125	295	429	136	544	562	2,496	
Steele	0	32	38	48	88	81	49	21	168	525	
Ransom	0	76	80	60	183	385	84	302	355	1,525	
Richland	3	281	1,335	213	431	922	192	654	1,269	5,300	
Sargent	0	46	793	46	101	110	41	84	268	1,489	
TOTAL	16	3,095	6,083	3,199	6,606	10,877	3,653	10,946	10,102	54,577	
ROW PERCENT	0.0	5.7	11.1	5.9	12.1	19.9	6.7	20.1	18.5	100.0	23.9
REGION VI											
Stutsman	14	436	1,064	508	557	1,710	455	1,751	1,968	8,461	
Wells	14	68	28	46	239	351	75	333	377	1,531	
McIntosh	0	14	84	24	169	180	59	294	257	1,081	
Logan	0	35	15	5	127	102	25	59	198	566	
Foster	14	96	47	96	161	265	76	281	273	1,309	
Dickey	0	83	141	81	232	404	76	473	407	1,897	
LaMoure	1	32	28	68	238	218	96	126	366	1,173	
Barnes	1	280	136	124	469	939	159	736	939	3,783	
Griggs	0	29	73	25	117	138	55	135	192	764	
TOTAL	44	1,073	1,616	977	2,309	4,307	1,074	4,188	4,977	20,565	
ROW PERCENT	0.2	5.2	7.9	4.8	11.2	20.9	5.2	20.4	24.2	100.0	9.0
REGION VII											
Burleigh	280	1,916	1,353	1,981	1,789	5,488	1,275	6,013	5,875	25,970	
McLean	198	405	56	336	231	479	105	532	693	3,035	
Sheridan	1	25	18	2	32	57	36	29	166	366	
Kidder	1	28	18	25	54	78	52	92	221	549	
Emmons	1	106	37	28	118	175	47	174	323	1,009	
Morton	120	675	725	496	571	1,528	244	1,340	1,448	7,147	
Mercer	506	2,246	31	437	159	418	81	438	418	4,734	
Oliver	132	173	3	170	7	31	8	10	140	674	
Grant	14	13	9	18	52	113	40	138	201	598	
Sioux	0	40	28	8	27	36	10	283	420	852	
TOTAL	1,253	5,627	2,278	3,501	3,040	8,403	1,878	9,049	9,905	44,934	
ROW PERCENT	2.8	12.5	5.1	7.8	6.8	18.7	4.2	20.1	22.0	100.0	19.7
REGION VIII											
Stark	709	726	576	604	681	2,294	379	2,012	1,314	9,295	
Slope	103	0	0	0	0	13	1	3	49	169	
Hettinger	42	62	30	32	104	165	49	145	238	867	
Golden Valley	87	29	32	19	67	168	38	121	138	699	
Dunn	300	95	7	70	122	135	28	55	252	1,064	
Bowman	280	66	15	37	168	276	57	225	235	1,329	
Billings	613	73	0	0	3	33	0	90	109	921	
Adams	14	58	60	45	152	170	37	294	177	1,007	
TOTAL	2,118	1,109	720	807	1,297	3,254	589	2,945	2,512	15,351	
ROW PERCENT	13.8	7.2	4.7	5.3	8.4	21.2	3.8	19.2	16.4	100.0	6.7
MULTI COUNTY	1,338	1,735	940	870	984	170	81	767	1,290	8,175	3.6
STATE TOTAL	8,819	17,720	16,198	13,954	20,833	46,255	11,011	44,753	48,792	228,335	
ROW PERCENT	3.8	7.8	7.1	6.1	9.1	20.3	4.8	19.6	21.4	100.0	100.0

* By place of residence.
** Totals may not add due to rounding.
1/ Excludes railroad employment.
2/ Excludes military employment.

APPENDIX IV

POVERTY

Table 1o

Households and Persons Receiving Food Stamps
by County, Quarterly Average, 1984:I*

	Average Household Size	Households	Persons	
			N	%
REGION I				
Williams	2.85	304	867	
Divide	2.85	36	104	
McKenzie	3.51	168	588	
TOTAL	3.07	508	1,559	4.6
REGION II				
Ward	2.97	851	2,531	
Bottineau	3.04	151	459	
Burke	3.08	49	150	
McHenry	2.75	163	447	
Mountrail	3.03	216	653	
Pierce	3.32	119	394	
Renville	2.87	18	51	
TOTAL	2.99	1,567	4,685	13.8
REGION III				
Ramsey	2.71	275	745	
Benson	3.98	254	1,012	
Cavalier	3.03	127	386	
Towner	2.93	84	246	
Eddy	2.88	77	223	
Rolette	3.87	702	2,718	
TOTAL	3.51	1,519	5,330	15.7
REGION IV				
Grand Forks	2.74	933	2,556	
Nelson	2.43	57	138	
Walsh	3.10	229	710	
Pembina	2.79	209	581	
TOTAL	2.79	1,428	3,985	11.8
REGION V				
Cass	2.51	1,024	2,570	
Traill	2.63	140	369	
Steele	2.75	43	118	
Ransom	2.74	134	369	
Richland	2.97	333	988	
Sargent	2.73	122	332	
TOTAL	2.64	1,796	4,746	14.0
REGION VI				
Stutsman	2.45	600	1,471	
Wells	2.70	124	335	
McIntosh	2.74	118	325	
Logan	3.27	81	266	
Foster	2.64	74	196	
Dickey	3.18	179	569	
LaMoure	3.32	119	395	
Barnes	2.90	246	712	
Griggs	2.93	85	249	
TOTAL	2.78	1,626	4,519	13.3
REGION VII				
Burleigh	2.67	904	2,402	
McLean	3.18	195	621	
Sheridan	2.96	81	240	
Kidder	3.32	90	298	
Emmons	3.63	105	381	
Morton	3.12	531	1,659	
Mercer	3.07	90	276	
Oliver	3.35	33	111	
Grant	3.34	134	448	
Sioux	4.79	104	515	
TOTAL	3.06	2,271	6,950	20.5
REGION VIII				
Stark	2.70	502	1,358	
Hettinger	2.84	45	127	
Dunn	3.17	64	202	
Bowman/Slope	2.75	61	167	
Billings/Golden Valley	3.11	38	117	
Adams	3.10	37	114	
TOTAL	2.79	747	2,085	6.2
STATE TOTAL	2.95	11,642	33,857	99.9

* Totals may not add due to rounding.

Table 17
Households and Persons Receiving Food Stamps
by County, Quarterly Average, 1983:I*

	Average Household Size	Households	Persons N	Persons %
REGION I				
Williams	3.02	347	1,047	
Divide	2.52	29	73	
McKenzie	3.49	215	750	
TOTAL	3.22	591	1,900	5.4
REGION II				
Ward	2.95	855	2,525	
Bottineau	3.24	176	571	
Burke	2.85	46	131	
McHenry	2.99	160	479	
Mountrail	3.19	207	660	
Pierce	3.37	104	350	
Renville	3.00	23	69	
TOTAL	3.05	1,570	4,785	13.6
REGION III				
Ramsey	2.60	277	719	
Benson	4.10	317	1,298	
Cavalier	3.10	123	381	
Towner	3.10	81	251	
Eddy	2.72	87	237	
Rolette	3.88	702	2,724	
TOTAL	3.53	1,588	5,610	15.9
REGION IV				
Grand Forks	2.80	1,140	3,194	
Nelson	2.52	56	141	
Walsh	2.94	229	673	
Pembina	2.62	178	467	
TOTAL	2.79	1,603	4,475	12.7
REGION V				
Cass	2.44	1,185	2,886	
Traill	2.68	139	372	
Steele	2.61	43	112	
Ransom	2.71	131	355	
Richland	2.88	319	917	
Sargent	2.85	128	365	
TOTAL	2.57	1,945	5,007	14.2
REGION VI				
Stutsman	2.43	573	1,391	
Wells	3.03	98	297	
McIntosh	2.61	132	345	
Logan	3.23	89	287	
Foster	2.75	63	173	
Dickey	3.05	168	513	
LaMoure	3.26	117	381	
Barnes	2.86	250	715	
Griggs	2.87	89	255	
TOTAL	2.76	1,579	4,357	12.3
REGION VII				
Burleigh	2.69	902	2,426	
McLean	3.10	202	626	
Sheridan	2.83	75	212	
Kidder	3.23	90	291	
Emmons	3.41	110	375	
Morton	3.08	508	1,566	
Mercer	2.97	102	303	
Oliver	3.35	20	67	
Grant	3.34	125	418	
Sioux	4.65	214	994	
TOTAL	3.10	2,348	7,276	20.6
REGION VIII				
Stark	2.93	401	1,175	
Hettinger	2.52	46	116	
Dunn	3.10	63	195	
Bowman/Slope	2.83	52	147	
Billings/Golden Valley	3.43	30	103	
Adams	2.98	40	119	
TOTAL	2.94	632	1,855	5.3
STATE TOTAL	2.98	11,855	35,267	100.0

* Totals may not add due to rounding.

Table 18

Characteristics of AFDC Caretaker Families by County, Quarterly Average, 1983:1*

	Average Number of Children Per Family	Number of Families With AFDC Eligible Children 1/	Number of AFDC Eligible Adults 2/	Number of AFDC Eligible Children	Total, AFDC Adults & Children N	%
REGION I						
Williams	1.86	107	104	199	303	
Divide	1.25	8	8	10	18	
McKenzie	1.68	88	71	148	219	
TOTAL	1.76	203	183	358	541	4.8
REGION II						
Ward	1.64	344	329	564	893	
Bottineau	2.13	45	44	96	140	
Burke	2.00	11	10	22	32	
McHenry	1.84	38	37	70	107	
Mountrail	1.88	96	80	180	260	
Pierce	1.80	25	22	45	67	
Renville	3.20	5	5	16	21	
TOTAL	1.76	564	528	992	1,520	13.6
REGION III						
Ramsey	1.77	86	83	152	235	
Benson	2.06	260	213	536	749	
Cavalier	1.96	27	27	53	80	
Towner	1.42	23	20	33	53	
Eddy	2.18	24	23	52	75	
Rolette	1.94	678	608	1,314	1,922	
TOTAL	1.95	1,098	974	2,140	3,114	27.8
REGION IV						
Grand Forks	1.70	229	224	390	614	
Nelson	1.27	11	12	14	26	
Walsh	1.69	75	73	127	200	
Pembina	1.63	59	55	96	151	
TOTAL	1.67	375	364	627	991	8.9
REGION V						
Cass	1.68	450	445	755	1,200	
Traill	1.82	22	22	40	62	
Steele	2.10	10	9	21	30	
Ransom	1.71	31	31	53	84	
Richland	1.58	71	69	112	181	
Sargent	1.66	29	28	48	76	
TOTAL	1.68	613	604	1,028	1,632	14.6
REGION VI						
Stutsman	1.80	134	135	241	376	
Wells	2.21	14	16	31	47	
McIntosh	1.44	9	10	13	23	
Logan	2.25	8	8	18	26	
Foster	2.26	23	22	52	74	
Dickey	1.77	26	25	46	71	
LaMoure	1.47	15	13	22	35	
Barnes	1.80	73	72	131	203	
Griggs	1.90	20	19	38	57	
TOTAL	1.84	322	320	591	911	8.1
REGION VII						
Burleigh	1.60	283	275	454	729	
McLean	2.05	81	72	166	238	
Sheridan	2.20	5	5	11	16	
Kidder	2.06	18	17	37	54	
Emmons	2.44	9	8	22	30	
Morton	1.91	148	146	282	428	
Mercer	1.67	42	38	70	108	
Oliver	1.33	6	5	8	13	
Grant	2.40	5	5	12	17	
Sioux	1.72	155	120	267	387	
TOTAL	1.77	752	691	1,329	2,020	18.1
REGION VIII						
Stark	1.80	96	93	173	266	
Slope	0	0	0	0	0	
Hettinger	1.92	12	12	23	35	
Golden Valley	1.46	11	11	16	27	
Dunn	1.81	26	20	47	67	
Bowman	1.55	11	10	17	27	
Billings	2.00	1	1	2	3	
Adams	1.64	11	11	18	29	
TOTAL	1.75	169	158	296	454	4.1
STATE TOTAL	1.80	4,097	3,821	7,361	11,185	100.0

* Totals may not add due to rounding

1/ Some AFDC eligible children reside with adults who are ineligible for AFDC grants.

2/ The terms "adult" and "child" refer to a legal-social relationship rather than to specific age categories.

APPENDIX V

EARNINGS AND INCOME

Table 19
Covered Employment and Average Monthly Earnings Per Job by Industry
for the United States and North Dakota, 1981 1/

Industry	Employment U.S. Number	U.S. Percent		North Dakota Number	North Dakota Percent		Average Earnings/Job $ As a % of U.S.
Total*							
Annual Average Jobs	90,731,595		99.9	229,682		99.9	
Av. Earnings/Job $	1,303			1,148			-11.9
Mining							
Annual Average Jobs	1,151,666		1.3	10,816		4.7	
Av. Earnings/Job $	2,141			2,061			-3.7
Construction							
Annual Average Jobs	4,201,853		4.6	14,989		6.5	
Av. Earnings/Job $	1,585			1,585			0.0
Manufacturing							
Annual Average Jobs	20,359,224		22.4	15,372		6.7	
Av. Earnings/Job $	1,583			1,301			-17.8
Trans., Comm., & P. Ut.							
Annual Average Jobs	4,689,840		5.2	13,770		6.0	
Av. Earnings/Job $	1,778			1,636			-8.0
Wholesale Trade							
Annual Average Jobs	5,422,093		6.0	21,181		9.2	
Av. Earnings/Job $	1,619			1,395			-13.8
Retail Trade							
Annual Average Jobs	15,274,910		16.8	45,313		19.7	
Av. Earnings/Job $	760			670			-11.8
Fin., Ins., & Re. Est.							
Annual Average Jobs	5,198,537		5.7	11,264		4.9	
Av. Earnings/Job $	1,360			1,165			-14.3
Services							
Annual Average Jobs	17,261,642		19.0	47,142		20.5	
Av. Earnings/Job $	1,108			928			-16.2
Agriculture							
Annual Average Jobs	1,103,797		1.2	1,987		0.7	
Av. Earnings/Job $	821			912			11.1
Total Government							
Annual Average Jobs	15,857,896	100.0	17.5	47,828	100.0	20.8	
Av. Earnings/Job $	1,312			1,181			-10.0
Federal Government							
Annual Average Jobs	2,948,981	18.6		9,531	19.9		
Av. Earnings/Job $	1,809			1,516			-16.2
State Government							
Annual Average Jobs	3,655,808	23.1		14,199	29.7		
Av. Earnings/Job $	1,268			1,241			- 2.1
Local Government							
Annual Average Jobs	9,253,107	58.3		24,098	50.4		
Av. Earnings/Job $	1,171			1,013			-13.5
Nonclassifiable							
Annual Average Jobs	209,127		0.2	Not			
Av. Earnings/Job $	1,116			Applicable			

*Totals may not add due to rounding.
SOURCE: "Employment and Wages: Annual Average 1980," U.S. Department of Labor/Bureau of Labor Statistics, November, 1983 and Job Service North Dakota Annual Average Wage Report (RAA09L).
1/ Excludes military and railroad earnings.

Table 20
Covered Employment and Average Monthly Earnings Per Job by Industry
for the United States and North Dakota, 1980 1/

Industry	Employment U.S. Number	U.S. Percent	North Dakota Number	North Dakota Percent	Average Earnings/Job $ As a % of U.S.
Total*					
Annual Average Jobs	89,944,434	100.0	225,837	99.9	
Av. Earnings/Job $	1,194		1,021		-14.5
Mining					
Annual Average Jobs	1,041,836	1.2	7,760	3.4	
Av. Earnings/Job $	1,919		1,818		-5.3
Construction					
Annual Average Jobs	4,365,690	4.9	16,444	7.3	
Av. Earnings/Job $	1,450		1,428		-1.5
Manufacturing					
Annual Average Jobs	20,495,693	22.8	15,549	6.9	
Av. Earnings/Job $	1,447		1,192		-17.7
Trans., Comm., & P. Ut.					
Annual Average Jobs	4,625,754	5.1	13,341	5.9	
Av. Earnings/Job $	1,617		1,474		-8.9
Wholesale Trade					
Annual Average Jobs	5,312,337	5.9	20,382	9.0	
Av. Earnings/Job $	1,497		1,290		-13.8
Retail Trade					
Annual Average Jobs	15,123,321	16.8	46,337	20.5	
Av. Earnings/Job $	713		624		-12.4
Fin., Ins., & Re. Est.					
Annual Average Jobs	5,064,906	5.6	10,937	4.8	
Av. Earnings/Job $	1,242		1,068		-14.0
Services					
Annual Average Jobs	16,641,768	18.5	44,755	19.8	
Av. Earnings/Job $	1,005		819		-18.5
Agriculture					
Annual Average Jobs	1,084,945	1.2	1,947	0.9	
Av. Earnings/Job $	759		828		9.1
Total Government					
Annual Average Jobs	16,058,170	100.0 17.9	48,296	100.0 21.4	
Av. Earnings/Job $	1,196		1,027		-14.1
Federal Government					
Annual Average Jobs	3,026,581	18.8	9,906	20.5	
Av. Earnings/Job $	1,609		1,335		-17.1
State Government					
Annual Average Jobs	3,671,057	22.9	14,239	29.5	
Av. Earnings/Job $	1,186		1,043		-12.1
Local Government					
Annual Average Jobs	9,360,532	58.3	24,151	50.0	
Av. Earnings/Job $	1,067		891		-16.5
Nonclassifiable					
Annual Average Jobs	129,033	0.1<	Not		
Av. Earnings/Job $	1,050		Applicable		

*Totals may not add due to rounding.
SOURCE: "Employment and Wages: Annual Average 1980," U.S. Department of Labor/Bureau of Labor Statistics, September, 1983 and Job Service North Dakota Annual Average Wage Report (RAA09L).
1/ Excludes military and railroad earnings.

Table 21
Covered Employment and Average Monthly Earnings Per Job by Industry
for the United States and North Dakota, 1979 1/

Industry	Employment U.S. Number	U.S. Percent		Employment North Dakota Number	North Dakota Percent		Average Earnings/Job $ As a % of U.S.
Total*							
Annual Average Jobs	89,574,874		100.0	224,807		99.9	
Av. Earnings/Job $	1,093			933			-14.6
Mining							
Annual Average Jobs	957,499		1.1	5,611		2.5	
Av. Earnings/Job $	1,717			1,608			-6.3
Construction							
Annual Average Jobs	4,574,133		5.1	18,540		8.3	
Av. Earnings/Job $	1,318			1,321			0.2
Manufacturing							
Annual Average Jobs	21,211,536		23.7	16,632		7.4	
Av. Earnings/Job $	1,315			1,086			-17.4
Trans., Comm., & P. Ut.							
Annual Average Jobs	4,595,333		5.1	12,606		5.6	
Av. Earnings/Job $	1,482			1,315			-11.3
Wholesale Trade							
Annual Average Jobs	5,271,426		5.9	21,445		9.5	
Av. Earnings/Job $	1,363			1,174			-13.7
Retail Trade							
Annual Average Jobs	15,112,006		16.9	46,169		20.5	
Av. Earnings/Job $	664			592			-10.8
Fin., Ins., & Re. Est.							
Annual Average Jobs	4,896,436		5.5	10,571		4.7	
Av. Earnings/Job $	1,121			974			-13.1
Services							
Annual Average Jobs	15,901,052		17.7	43,428		19.3	
Av. Earnings/Job $	909			732			-19.5
Agriculture							
Annual Average Jobs	1,042,818		1.2	1,849		0.8	
Av. Earnings/Job $	693			795			14.7
Total Government							
Annual Average Jobs	15,856,695	99.9	17.6	47,957	100.0	21.3	
Av. Earnings/Job $	1,100			951			-13.5
Federal Government							
Annual Average Jobs	2,939,516	18.5		9,617	20.1		
Av. Earnings/Job $	1,513			1,259			-16.8
State Government							
Annual Average Jobs	3,603,244	22.7		14,016	29.2		
Av. Earnings/Job $	1,079			975			-9.6
Local Government							
Annual Average Jobs	9,313,935	58.7		23,324	50.7		
Av. Earnings/Job $	978			815			-16.7
Nonclassifiable							
Annual Average Jobs	155,044		0.2	Not			
Av. Earnings/Job $	923			Applicable			

*Totals may not add due to rounding.
SOURCE: "Employment and Wages: Annual Average 1979," U.S. Department of Labor/Bureau of Labor Statistics, January, 1983.
1/ Excludes military and railroad earnings.

Table 22
Job Insurance Covered Employment, Average Monthly Earnings
Per Job, and Total Earnings for 1978-1983 by Quarter

		Employment		Earnings			
		Average Monthly Employment	Change From a Year Ago	Average Monthly Earnings	Change From a Year Ago	Total Earnings	Change From a Year Ago
		N	%	$	%	$	%
1978	I	196,057	--	814	--	478,550,963	--
	II	207,795	--	837	--	521,762,699	--
	III	211,572	--	861	--	546,435,525	--
	IV	213,839	--	902	--	578,552,191	--
						2,125,301,378	
1979	I	205,143	4.6	888	9.1	546,479,319	14.2
	II	216,312	4.1	905	8.1	587,123,051	12.5
	III	220,551	4.2	934	8.5	618,009,387	13.1
	IV	223,775	4.6	991	9.9	665,435,856	15.0
						2,417,047,613	
1980	I	212,894	3.8	977	10.0	623,963,809	14.2
	II	226,811	4.9	994	9.8	676,114,063	15.2
	III	224,145	1.6	1,018	9.0	684,732,041	10.8
	IV	228,383	2.1	1,085	9.5	743,652,708	11.8
						2,728,462,621	
1981	I	218,030	2.4	1,066	9.1	697,334,024	11.8
	II	228,571	0.8	1,124	13.1	770,510,024	14.0
	III	231,594	3.3	1,152	13.2	800,185,024	16.9
	IV	236,660	3.6	1,223	12.7	875,419,104	17.7
						3,143,448,176	
1982	I	224,495	3.0	1,184	11.1	797,237,368	14.3
	II	230,752	1.0	1,217	8.3	842,529,920	9.3
	III	231,558	0.0	1,200	4.2	833,498,380	4.2
	IV	231,598	-2.1	1,267	3.6	880,282,922	0.6
						3,353,548,590	
1983 P/	I	221,370	-1.4	1,210	2.3	803,825,872	0.8
	II	231,165	0.2	1,251	2.8	867,429,991	3.0
	III	235,592	1.7	1,253	4.4	886,161,604	6.3
	IV	238,075	2.8	1,288	1.7	920,040,720	4.5
						3,477,458,187	

P/ Preliminary

Table 23
Average Monthly Earnings Per Job
by Industry For North Dakota
1980-1983

	1980		1981		1982		1983*	
	$	% Change	$	% Change	$	% Change	$	% Change
Mining	1,818	13.1	2,061	13.4	2,116	2.7	2,062	-2.5
Construction	1,428	8.1	1,585	11.0	1,719	8.5	1,855	7.9
Manufacturing	1,192	9.8	1,301	9.1	1,397	7.4	1,432	2.5
Transportation, Communication, and Public Utilities	1,474	12.1	1,636	11.0	1,731	5.8	1,817	5.0
Wholesale Trade	1,290	9.9	1,395	8.1	1,462	4.8	1,448	-1.0
Retail Trade	624	5.4	670	7.4	703	4.9	702	-0.1
Finance, Insurance, and Real Estate	1,068	9.7	1,165	9.1	1,252	7.5	1,282	2.4
Services	819	11.9	928	13.3	999	7.7	1,035	3.6
Agriculture	828	4.2	912	10.1	950	4.2	974	2.5
Government	1,027	8.0	1,181	15.0	1,284	8.7	1,293	0.7
Total	1,021	9.4	1,148	12.4	1,217	6.0	1,234	1.4

*Preliminary

JOB SERVICE NORTH DAKOTA
LOCAL OFFICES

Region 1
Williston Regional Office
422 First Avenue West
Williston, North Dakota 58801
Telephone 572-7771

Region 2
Minot Regional Office
3416 North Broadway
Minot, North Dakota 58701
Telephone 852-2164

Region 3
Devils Lake Regional Office
301 South College Drive
Devils Lake, North Dakota 58301
Telephone 662-2181

Rolla District Office
Six Northwest First Street
Rolla, North Dakota 58367
Telephone 477-5631

Region 4
Grand Forks Regional Office
2016 South Washington
Grand Forks, North Dakota 58201
Telephone 781-3711

Grafton District Office
728 Hill Avenue South
Grafton, North Dakota 58237
Telephone 352-2202

UND Placement Office
Room 141, McCannel Hall
Grand Forks, North Dakota 58201
Telephone 777-3904

Region 5
Fargo Regional Office
1350 32nd Street South
Fargo, North Dakota 58103
Telephone 237-7113

Region 5--Continued
Wahpeton District Office
524 Second Avenue North
Wahpeton, North Dakota 58075
Telephone 671-2711

NDSU
Placement Bureau
Memorial Union Building
Fargo, North Dakota 58105
Telephone 237-7111

Region 6
Jamestown Regional Office
429 Second Street Southwest
Jamestown, North Dakota 58401
Telephone 251-2256

Valley City District Office
223 North Central
Valley City, North Dakota 58072
Telephone 845-7261

Region 7
Bismarck Regional Office
216 Second Street
Bismarck, North Dakota 58501
Telephone 224-2880

Mandan District Office
501 First Street Northwest
Mandan, North Dakota 58554
Telephone 663-6461

Beulah District Office
118 West Main
Beulah, North Dakota, 58523
Telephone Number 873-5607

Region 8
Dickinson Regional Office
66 Osborn Drive
Dickinson, North Dakota 58601
Telephone 227-2361

Teacher Placement Service
1000 East Divide Avenue
Bismarck, North Dakota 58501
Telephone 224-3497

Veterans Employment
and Training Service
1000 East Divide
Bismarck, North Dakota 58501
Telephone 224-2865